The Educational Record

Published Quarterly by

The American Council on Education

Volume 16 April, 1935 No. 2

Editor:
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Annual Subscription, $2.00
Entered as second-class matter June 8, 1932, at the Post Office at
Washington, D. C., under the act of August 24, 1912

Directing the Energies of Youth into Proper Channels[1]

IN THE modern world, each generation must face anew the problems of security and change. The younger generation just coming to maturity must to-day face the problems both of revolutionary changes and almost universal insecurity. It is a stark outlook which those who are called upon either to teach or to lead in our day will do well to remember. In twenty years the world has experienced the devastating consequences of a Great War, followed inevitably by a Great Depression. Probably no generation in all history has witnessed a more colossal destruction of human life and material wealth than our own. Certainly no generation of youth has received from their elders such a legacy of disillusionment and demoralization as the present.

Nor is this all. During the last five of these twenty years, the Great Depression has turned a crisis into chaos. One by one governments have been overthrown by violence. Dictatorships have been set up, where parliamentary control once existed. Business and banking institutions to an unprecedented extent have collapsed under economic pressure. Unemployment has mounted to such proportions in our western civilization that every third man is idle. The relief needs for many states have added a burden of debt to the fiscal structure that they may never be able to absorb. In our land the social consequences of prolonged idleness and public relief have been a decay of self-reliance and widespread insecurity. Its effect upon our youth has been especially debilitating.

Six of the eleven million of our present unemployed are between the ages of 16 and 25. Many of these younger men have never worked a whole year since they left school; some have never worked at all. Side by side with this fact we must remember that there are to-day 22 million, or one out of every six persons in the United States, on public relief—the largest number on the public bounty in history. Think what that condition means in the lives of our young people! "Six million children under 18 . . . are living months and years of their young lives under the routines of mass relief, still euphemistically termed emergency," wrote a noted sociologist recently. "For these children, one out of seven of the youth of America, life is reduced to a catch-as-catch-can, day-by-day level of subsistence. Relief is in the home, to be sure, but what security can a child feel in a home that is itself insecure, its atmosphere charged with fear and despair. Six million of its youth conditioned in insecurity and pauperized by the grocery dole is not, I submit, a very promising prospect for this or any other country."

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[1] Address before Section on Prevention, New Jersey Crime Conference, Trenton. New Jersey, March 1, 1935.

These are some of the stern and stubborn facts of our contemporary scene. They are not abstractions but concern the lives and fortunes of men and women and children in our land. Thus we cannot hope to understand the problems of modern youth without taking into consideration these forces which have transformed the character of the world into which they have been born and reared.

Against this background of profound sociological changes let us reconsider some of our conceptions of the prevention of delinquency. Much of the discussion of this problem proceeds upon the supposition that our problem to-day is much as it was a generation ago; I am persuaded that it is substantially different—for the precise reasons which I have suggested. I am also persuaded that our approach to the problem must be substantially different.

In the first place, the very idea of the prevention of delinquency in America under the present conditions is paradoxical. We deny to millions of our population the right to the very basis of a good life and then meet solemnly to inquire why, in spite of this fact, some of them are not good citizens. We give our support to a social order which makes for dependence and insecurity, and then wonder why the old attitudes of self-reliance and individual security seem to be disappearing. We shift the proper responsibilities of the home upon school, church, club, and other agencies, give to these institutions either a grudging or inadequate support, and then complain that these "foster parents" have not succeeded in preventing what our abdication of parental duties made inevitable.

A crime conference is a public confession of our own social inadequacy and an admission of our inability to manage our own household. It can serve the public welfare only if those who participate are willing not only to face the underlying facts but to act upon the basis of them. Crime is not a thing apart which can be isolated and treated as a single phenomenon; it is the net resultant of complex forces. It is a symptom, not a cause. If we would prevent the symptom we must remove the cause. To talk of less than such a fundamental approach to the problem is unworthy of such a conference. To assert, for example, that modern youth is a wayward generation and the cause lies in its perverseness, is to seek to pluck the mote out of our brother's eye and leave the beam in our own. Such delinquency as exists among our youth is the direct result of these causal factors which I have described.

The very concept of the prevention of crime is not only a negative phrase; it perpetuates a mental aberration. The seeds of anti-social behavior are sown in youthful maladjustments in the school, the community or the home. Seventy-five per cent of our crime commences in a juvenile delinquency. But youth is not criminal; it is adventurous, unadjusted, undirected. It is the victim of the conditioning factors which go to make up the complex of all our society. There is one effective way to prevent crime, and that is to stop juvenile delinquency. We can do this by removing those causal factors, economic, social, and psychological, which produce maladjustments and subsequent delinquency. But this is essentially a problem of social reform rather than prison reform. Too long we have placed our emphasis on the latter; its ineffectiveness has finally been demonstrated. We cannot purify the well by painting the pump!

Furthermore, the direction of the energies of youth into proper channels rests upon the assumption, first, that we elders know what are proper channels for the energies of youth; and, secondly, that we are competent to direct these energies. I purpose to prove that both assumptions are incorrect. It is a shift both in emphasis and approach which I submit has become imperative if we would prevent delinquency among our youth.

One of the wisest of American teachers once observed that the wisdom of age has never been able to compete with the enthusiasm of youth. "If youth only knew; if age only dared." The resolution of that apparent paradox is, I believe, the clue to the psychological part of our problem; I have already suggested its present social setting. Dr. Thorndike in his notable study on the nature of the learning process has pointed out that learning is most efficient when directly related to performance. "The time for learning anything is the time when you need it." He also discovered that youth is the most inefficient learning period. The conclusion is inevitable: youth is inefficient because it is divorced from doing. All through our school system from the primary grades to the graduate school it is all *practice*-thinking, *practice*-doing. This prolonged inhibition of doing, of functioning in a real situation results in paralyzing the very capacity to do. Youth is irrepressibly adventurous, curious, creative, critical, imitative, and realistic—all of these. It wants action; it wants to do things; it wants to create. We deny them that right. We compel them to keep up their practice-thinking, to find their satisfactions in the motion pictures and adolescent romances, with the result that their creative energies are all burned out by the time they are permitted to function. This repression of action; this denial of any genuine participation sets up psychoses, inhibitions, and all of the multitudinous reactions which constitute the maladjustments that in turn lead to delinquency.

Who, then, is the delinquent? Is it youth who, denied by both school and society the legitimate satisfaction of these instincts, turns to activities outside the law; or are we in fact delinquent in our guidance of adventurous youth? Face to face with a war emergency we turn to our youth at the age of 18 and make them full-fledged soldiers, but, when we are confronted with civic emergency, how often do we afford them an opportunity to participate as full-fledged citizens of the community? Do we not rather permit their "swords to rust in the scabbards" on every occasion save war itself? And even in their own imperium—of school and college—we deprive youth of much of their capacity to do and shape their own lives. Athletics are run by graduate managers and hired coaches. Club and fraternities are frequently directed by resident counsellors and tutors. Is there not some relation between the paralysis of the creative energies of our youth, and our civic indifference to corruption, racketeering, and widespread lawlessness? May this not be one explanation of why our communal life everywhere lags behind our mechanical achievements? No nation has given such a great proportion of its citizens compulsory schooling over so long a period, and yet no nation presents such a record of criminal behavior.

I am making a plea then for a shift in emphasis—from what we elders think is good or proper to what youth knows gives them satisfaction. The key to our new approach is not in the wisdom of age but in the feelings of youth. What gives to youth a satisfying after-result is to be the criterion; not our preconceived notions of what should satisfy them. We must build our program around the present desires of the youth and not the faint recollection of our own lost youth. Our task as a community consists less in directing the energies of youth into proper channels than in providing an opportunity for youth to grow in the fullness of its stature, to seek those paths of adventure which will bring emotionally satisfying experiences.

Dare we trust youth? Dare we trust ourselves? A week ago we celebrated the birthday of the Father of our Country. America was not only a young republic in history, but the revolution and the new government were fashioned by young men.

Thomas Jefferson was thirty-three when he wrote the Declaration of Independence. Alexander Hamilton, the greatest Secretary of the Treasury, was not thirty-five when he outlined the basic principles of our fiscal system. Youth can and will act if age can and will give them a chance. Youth repressed, youth brought up in terms of the inhibitions of its elders, will be helpless when opportunity does come.

But there should be another compelling reason why we should be prepared to shift the emphasis of youth from practice-thinking to some participation in real situations. It is the very volume of crime, both youthful and adult, in America. Its staggering cost outweighs all other costs. Twenty per cent of the national income is used for the detection, apprehension, conviction, detention, and re-establishment of our offenders. Could any evidence of our social inadequacy be more compelling? We may meet solemnly and pass resolutions calling for more money to build more institutions to incarcerate more delinquents. But if we do, and look no deeper either at our economic order or our psychological approach, the conference will be a monument to our stupidity.

There are, however, some headlands to guide our policy in such a new approach to the problems of youth. This year the Boy Scouts of America celebrate their 25th anniversary as a character-building agency among American youth. In this quarter of a century, six and a half million, or one in seven, boys have received the benefits of scouting in all its branches and its training for citizenship. The record of these graduates has been notable; the Warden of Sing Sing Prison once observed that he had never had a former Boy Scout as a prisoner. Other institutional heads have made similar statements. The answer in part is that the Scout program has been soundly built around the emotional satisfactions of youth; it has provided opportunities for its members to participate fully in real living situations; it has been related to general community service. But the records would suggest that its membership has been drawn from boys who have definite economic advantages or superior mental equipment. How else may one conclude from the fact that, whereas but 5 per cent of our population go to college, in the first twenty years of Scouting no less than 65 per cent of our college youth were former Scouts? The Girl Scouts, which was founded in 1912, has attempted to provide the same type of satisfying experience among girls. Today it reaches approximately 300,000 girls. In an even more limited way, it has performed a most useful service of youthful guidance.

The Young Men's and Women's Associations, among Protestants, Catholics, and Jews, have among their respective groups met a compelling need of recreational and educational opportunities among youth under religious, although frequently non-sectarian, auspices. But here, too, one reaches not the majority but the minority, albeit an influential minority in the community.

Among the more definitely underprivileged of our youth, the boys' clubs and social settlements have become important character-building agencies. But here again we are dealing with a minority of our youth, and frequently that portion least in need of such character-building to prevent delinquency. One of the most notable efforts in our country to meet the needs of developing an emotionally satisfying program among a group of underprivileged boys during the formative years of adolescence is the plan of self-government which has been developed by the Boys' Brotherhood Republic in Chicago and New York. By placing upon these youth between the ages of 14 and 18 the full responsibility for their civic development through fashioning a program of community self-service in their own "City Hall," the B.B.R. has succeeded in turning these potential youthful delinquents into responsible citizens.

Let me cite but a single example. Howard is fifteen. His father is serving a sentence of fourteen years in the Illinois State Prison and has already served eight years. His mother works as a scrubwoman in a Chicago office building, her hours being from 6:45 p. m. to 7 a. m.; she is off duty on Sunday night. Her only contact with her son is between work periods, and then only once in a while.

The Juvenile Court record shows that Howard first came into contact with probation officers when he was eight years old. In December, 1934, he was released from reform school, having been there thirteen months. Once he escaped, but returned himself after traveling by foot to Michigan City, Indiana. There are nine arrests credited to this boy since 1927, always for stealing because he was hungry. In January, 1935, Howard was given over to the Boys' Brotherhood Republic Investigating Committee by a policeman in the neighborhood. His record since this time has been good. He still lives with his mother, but she has moved nearer the B.B.R. Howard is attending school and is in the sixth grade. The B.B.R. got him an after-school job, and he is now earning $3.50 a week by taking care of a newspaper route from 3 to 6 p.m. He is now well dressed and takes an interest in everything at the B.B.R., having missed only one night since he started. He is also a member of the B.B.R. Airplane Club.

The record in Chicago, where over 10,000 such youths have been trained without a single reversion to major crime, is as notable as it is exceptional. When it is remembered that it costs $2,000 a year in New York to arrest and incarcerate every delinquent, according to official reports, and it costs the Boys' Brotherhood Republic less than $16 a year to direct the energies of these youthful delinquents, with less than 5 per cent failures, the contrast must be apparent. Its unique methods prompted Dr. Felix Adler to say, shortly before his death: "The idea of the Boys' Brotherhood Republic seems to me strangely appealing, since it sheds a ray of light into a situation that excites pity and anxiety. The plan as outlined is progressive and for once constructive. It takes the propensities of young boys that if allowed to run wild will lead to gangdom, and turns them into ways of usefulness, good citizenship and mutual kindness."

The Civilian Conservation Corps, originally created as a relief measure under the New Deal to provide creative work for unemployed young men between the ages of 18 and 25 whose families were in need, has proved to be the most successful of all the New Deal projects—primarily because it provided the necessary satisfying after-results for these young men by affording them real jobs, with intelligent guidance, and an opportunity for public service and cooperative activity. What began as a temporary relief device may well become a permanent part of our educational system and universalize the privilege of citizen service. It may even provide something of Professor William James' celebrated "Moral Equivalent for War." Here also but a minority of our youth, or less than 700,000 in two years, have been reached, at a cost of approximately $1,100 per man.

There are today but three institutions in our land, besides business itself, that reach a majority of youth in any of the age groups—the Church, the School, and the Home.

The Church, with its traditional leadership in moral training, actually reaches but 50 per cent of the population. There are 44 million church members and 6 million in young people's societies. The trend toward mechanization and materialism, and the failure on the part of many religious communions to keep abreast of the social thinking of the times, have greatly impaired this historic institution's full social influence on youth. Such is the reasonable conclusion from our present predicament.

Next to the home, the school and college come nearer touching the life of young America than any other institution. In the United States 30 millions of our youth attend school. In the state of New Jersey, 72.7 per cent or 871,532 of the youth from the age of 5 to 21 attend school or college. But the rate at which they drop off after the school-leaving age is also striking. Ninety-one per cent of the youth between 14 and 15 years attend school in New Jersey; 47.7 per cent from 16 to 17; and but 16.9 per cent between 18 and 21, which makes an average of 29.4 per cent between 16 and 21. When youth needs guidance most in the adjustment of his community relationships, however, the state discontinues its guidance. It is necessary that we point to this obvious lack of coordinated community concern for our youth. The assumption also that youth can be fully prepared for a rapidly changing technological civilization under such a system of schooling is unsupported by the facts. In New Jersey, for example, the largest age grouping under custodial care either in institutions or on parole and probation is in the age grouping from 15 to 19, at the very period when school attendance drops precipitously from 91.1 per cent to an average of 29.4 per cent. In the City of New York, Commissioner of Police Valentine recently asserted that the largest percentage of offenders are between 16 and 20 years of age, and this percentage is increasing.

For this condition both school and community stand responsible—the school for failing to provide the kind of stimulating program of social participation which would attract youth, and the community for its failure to provide adequate leisure time activities. Our community recreational program is wholly inadequate for the needs of youth. One quarter of our youth are denied such facilities and the balance have inadequate service. Our schools, furthermore, have hardly as yet conceived of their task of making education a continuous process throughout life, that ends with the grave rather than the grades. Yet it becomes clearly apparent that we cannot run our modern democracy with anything less than a widespread and continuous diffusion of knowledge among the citizens about their problems. Here is a challenge to the schools!

There remains, finally, the basic social unit in our society—the home. Recently Sir James Barrie said whimsically that the "oldest university in Scotland is the home." It is the oldest university in any land! But in our technological civilization the home has been greatly transformed in the past half-century from a center of economic and cultural self-sufficiency to one of dependence both for its economic security and cultural opportunities on the resources of the community. What was formerly our greatest single character-building agency has been vitally impaired in its effectiveness. And the results are too often unadjusted youths.

What then shall we say is the sum of the matter? How shall we direct the energies of youth into proper channels?

First, by providing an opportunity for youth itself to participate in the development of its own program, which shall be emotionally satisfying and socially useful.

Second, by an integration of all the institutions and agencies of the community, such as the home, church, school, and other welfare and character-building agencies in an effort to cooperate in serving the needs of all our youth.

Third, by the establishment of those standards of social justice in our national economy which will enlist the fullest measure of devotion and public service from the citizenship.

Such a program of prevention looks beneath and beyond mere improvements in the administration of police departments, courts, and prisons. It holds a mirror up to the entire community! It looks to the transformation of our social order to accord with the democratic ideal. Nothing short of this will suffice if we would build in America that Great Society which shall be equal to our hopes and worthy of our dreams.

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of America.

The Desired Result of Freshman Composition Courses

A FAIRLY perfect piece of educational machinery is set up whenever a youth and an older man walk and talk and work together. The youth provides enthusiasm, eager inquiry, a willingness to abandon the restraints of the past, and a readiness to adventure into the unknown upon a basis of untested hypotheses. The older man offers experience, the products of mental speculation, a respect for tested tradition, and a technique which may eliminate needless error, and prevent waste of time.

When this educational machinery is expanded, and we have one man attempting to pass along his experience to ten youths, something is lost. But when we have five hundred men attempting to walk and talk and pursue inquiry with five thousand youths, it seems at times as though the machinery must break down. There are so many necessary adjustments which have nothing to do with education—conflicts of schedule, social problems arising among the five thousand who have to be brought together at one place, loss of a sense of intimate personal companionship, and a hundred other things which seem to drain the oil from the machine, and put sand in its place.

When I try to determine the *desired result* of Freshman Composition courses in a university, and then to propose how that result shall be attained, my reasoning as to both questions is constantly distorted by a consciousness of the unwieldy engine which must be used in education. My imagination is put under restraint, my hope is curtailed, and I think only of the highest result that might possibly be accomplished by education *en masse,* with a hundred forces operating to prevent attainment.

Fifteen hundred freshmen, let us say, enter a university in the fall, some enrolled in the college of engineering, some in forestry, some in home economics, business administration, fine arts, liberal arts, teaching. These separate enrollments mean that already they are thinking of education in the narrow terms of the vocation they will follow; they have been forced to think in such terms in order to enroll at all.

Fifteen hundred freshmen, who hope at the end of four years to scatter widely into life's varied activities! Some of these vocations will demand the writing of letters, reports, appeals, addresses, opinions, criticisms. Other vocations, these youngsters fondly imagine, will make very little use of the written word. Yet all of them will call for intercommunication of ideas between man and man; and that apprentice who is unable to transmit clearly to another in writing the ideas which relate to his business affairs must suffer in competition.

Fifteen hundred freshmen, all seeking at once to be educated for different commercial and professional pursuits; but all vaguely wanting to be able to face the competitions of life with disciplined minds and stimulated imaginations. Facing them are five hundred teachers who have themselves been separated into vocational groups and so have become more than ordinarily conscious of the differing vocational objectives of their young charges, with the result that teachers of composition, for instance, begin to think that there is one kind of English for business, known as "business English," and another kind known as "newspaper English," and another as "forestry English"; losing sight of the fact that there are only two kinds of written English in use today—good English and bad English.

For expediency's sake this freshman year is the only time when *all* of the fifteen hundred will be subject to certain basic disciplines, and required to master a few universally needed techniques. This fact increases the importance of the question, "What is the desired result of any freshman course?"

The objective of freshman composition seems to be twofold. The first is to train young people in the use of the written word as a necessary tool, conveying clearly to others such ideas as they possess, and conforming to a generally accepted standard of good literary manners.

The second objective is to train the mind itself by encouraging self-expression, inducing it to adventure into fields of logic or imagination, and then disciplining it by establishing self-control over the very emotons which are aroused by such adventure.

Let me translate these two objectives into working terms: All freshmen must be taught to express their ideas simply and clearly and effectively; that is, with the least verbiage and circumlocution that would tend to obscure the thought they wish to express. Practice must be devised which will help them to gain such a skill. Second, they are to be encouraged to experiment with the written expression of their convictions and their dreams and fancies; for by learning to control and clarify the *expression* of these ideas and emotions they may gain better control over the mind itself which gives them birth.

Before discussing the best way to obtain these desired results, it is necessary to consider a problem presented by our ponderous machinery of education. Written composition is only one of several studies which, our administrators have agreed, form an essential background for any educational program. Others are an acquaintance with history, an understanding of the elementary principles of a natural science, the structure of another language; and an appreciation of the great literatures of the past, especially our own. This is a large order; and because the great literatures must be read in English, and written composition must be practiced in English, and because there is too little time for everything, and too little money for instructors, it is decreed that the same instructor shall give practice in written composition who conducts the study of ancient and modern literatures; and he must do it in the same hour. Although he must perform this dual rôle, it may be true that he has been selected for his task merely because of his proved acquaintanceship with the great literatures of the past and present, even though he lacks ability to write.

In other words, as we try to figure out the desired result of freshman composition and how best to attain it, we are embarrassed by the discovery that its teachers are selected because of their proficiency in something else, and the time they may devote to teaching it must be shared with something else!

The administrator argues in his own defense that there is so close a kinship between the two teaching tasks that it is reasonable to merge them. That I must emphatically deny.

For consider again our desired result,—the attainment of ability to transmit ideas to another, today, unobscured by verbiage and circumlocutions. But literatures of the past are not necessarily written in present-day fashions of communication; it is even likely that they are not. The artist who worked with words as a painter works with pigments, dealt with composition as a *fine art,* and not as though it were a tool for the use of every man in his everyday business. He played with word sounds, and devices of expression; he may have been euphemistic, or pompous, or have buried his thought under a profligacy of phrases. As a historic example of a long dead mode of written expression he is of vast interest to the student of literary history; but he is a stumbling block, or a will-o-the-wisp, or a false prophet to the student who is practicing present-day composition. Young people have had their ability to express their ideas with simple directness more often destroyed by knowing too much about past literatures than by knowing too little about the dead masters of dead styles.

To one who is jealous for the success of Freshman Composition there is irony in the fact that the study with which it must share its meager time does not seem to achieve its own desired results! The freshman course in Literature also has a twofold purpose: to acquaint students with the history and tradition of the world's great literatures; and to create a taste for better reading. Inquiries conducted among students and graduates of several universities bring a depressing reply from the majority that it succeeded in doing neither.

At least half of composition's desired result is the skilled handling of a necessary tool by all students; the ability to communicate clearly to others such ideas as they possess, in a language that others will understand. First of all, then, I wish that we might divorce this classroom task from the study of literatures, and put it in the hands of instructors selected because of their understanding of the writing problem, and their ability to write down their own ideas simply and clearly.

That is point one, and perhaps it is too much to ask; especially at the present moment when instructors in any field may be asked to carry a double load for economy's sake.

My second suggestion is that from the first moment of practice students should be encouraged to address their writing to a group of their fellow students. The reason is obvious. They seek skill in communicating ideas in this present-day world. They associate their literature instructor not only with literary styles but with thoughts belonging to other periods, and instinctively they struggle to address him in those outmoded fashions. Such an attempt might have value if they could continue it until it was mastered. But the moment they leave the classroom they must abandon it for the fashions of today, however crude, and the result is confusion rather than the development of a better style for workaday use.

I would have them address their writing to their fellow classmates because of the actual stimulus to effort. They know then that they must first of all be *interesting*, in order to hold attention. The young writer who is addressing fellow students is able to measure the understanding of his audience, and adjust his vocabulary to fit the need; this is exactly the task that will continue to confront him after graduation.

To be quite specific, I should insist that every writing class be a "seminar;" eliminate the teacher's desk and platform, and arrange chairs in an informal circle, or around a table, so that the reader faces his audience and addresses them. The conventional classroom is a manifest absurdity when used for such a task; for the reader sitting in a front row has his back to the audience, and if in a rear row he faces an audience of backs. He must learn to seek as his greatest reward the evidence of aroused interest among his fellows, and a sense that he has communicated to them every shade of his thought, or all the force of his argument.

Since I am writing so specifically, let me anticipate an objec-

and addressing an audience of their fellows, should get their news out of a world to which they all belong. The best training may come from the reporting of interviews with interesting people, having full regard for the rights of the person interviewed; and a realization that the interviewer tion. How can large groups of freshmen be dealt with in this fashion? It is simple enough if the number does not go beyond twenty-four; and let me add that any university which assembles more than twenty-four students in a composition classroom, however it is conducted, has ceased to offer an education and is maintaining useless and expensive machinery.

With twenty-four students meeting three days a week, eight may read each day if the writings be brief enough; and there is as much training to be gotten from short written exercises as from long ones. The very effort to have them brief and still effective is in itself good training.

What shall be the subject-matter of freshman "themes" in order to attain the desired two-fold result? Incidentally, let us do away with that word "theme." There is no such thing in a real world. It smacks of schoolboy tasks, and schoolroom unreality. My first assignments would be reportorial in character. One may borrow the devices of the daily press without any need for imitating its bad manners. The newspaper has, after all, trained more good writers than has any other school; and three of its specifications are well worth borrowing.

First, facts shall be stated exactly, with evidences of verification. Second, the rights of the reader shall be considered, and his interest justifiably aroused. He has a right to know at once what the story is about, and to have those elements assembled in it which relate it to his own experience, so long as they are not exaggerated. Most important of all, the reporter of *facts* shall not distort them by an injection of his own personal opinions. The ability to distinguish between fact and opinion is a first essential for any user of the written word.

These young writers, temporarily playing at reporting, must himself first be well informed, in order to ask intelligent questions.

From reporting facts, I should pass to the expression of opinion, in "editorial" and criticism. If book reviews are offered, I should insist that the reviewer, in fairness to the author, shall first give unprejudiced facts about the book before offering opinion about it.

From editorial judgments I should proceed to reflective considerations of the same subjects, thus producing short informal essays.

After these various forms of writing have been practiced I should allow my students to contribute to the class program such brief writing as they choose, whether it be prose or verse, fact or fancy, attack or persuasion. Since all forms will have acquired equal status, there is nothing to cause the matter-of-fact and unimaginative youth any embarrassment when his factual article is contrasted with the dreams of a classroom poet. All have intrinsic merit in a real world of real writing.

This outline of a composition program is necessarily brief, because this article is not prepared for textbook purposes. What alternate methods are being followed in freshman classes all over the country today? Generally, the young man is asked to write a theme based on the literature which is being read in class at the moment. Perhaps he must write a "critique" of Browning's "Last Duchess" or discuss the sanity of Hamlet, or the feminine world of Jane Eyre's day. If his heart is not in such assignments the result must be an unnatural style temporarily assumed to fit the whims of an instructor who apparently dwells in some outmoded literary world.

In other freshman classrooms throughout the country youngsters are given models of literary style—detached fragments of "description" or "narration" or "argumentation"—and encouraged to imitate them. This is good training, perhaps, for the "born writer," not for the rank and file. But the born writer needs no classroom. He will train himself.

Defenders of these methods will retort that students have been taught to write by these means and have gone out into the world to become effective citizens, able to use the written word skilfully and with advantage. But there is testimony to the effect that thousands have gone out into the world and are still going, unable to write a good letter, or to express even their simplest ideas in clear and concise fashion. As for the world's writers, the creative artists in the field of literature, God's anointed, they have no place in the argument because many of the greatest never went to college; and no one will ever know how much harm freshman composition may have done to those who went, if it affected them either one way or the other.

That other desired result of freshman composition remains to be considered: that it shall provide an opportunity for self-expression, and then develop self-control by demanding logical arrangement of thought, or by a discipline of the emotions.

This result also may best be attained by the method already outlined. The frank judgment, either silent or expressed, of a critical audience of his own associates for each young reader, provides a far more effective discipline than does the blue pencil of an instructor; although there is nothing to prevent the application of the latter also. Generally it is not necessary, if the judgment of fellow students is appraised or amplified in the instructor's summing up.

An inquiry into the effectiveness of composition teaching has been conducted during the past two years at Syracuse University under a grant from the Carnegie Foundation.[1]

The directors of the study began their work by an inquiry addressed to present-day leaders in the outside world of business and society as to whether or not they were satisfied with the craftsmanship of young college graduates today in the use of the written word. The voluminous replies were overwhelmingly in the negative.[1]

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[1] See "An Outline of an Inquiry Now Being Made at Syracuse University into the Methods, Purposes and Effectiveness of the Training of College Freshmen in Written Composition, under the general direction of Burges Johnson, Litt.D., and Helene Hartley, Ph.D." 42 pages. Published by Director of Public Relations, Syracuse University, Syracuse, N. Y. Fifteen cents per copy, postpaid.

With this complaint as a basis, the directors set up three types of composition classroom with several hundred students involved, and a number of instructors. By carrying on this inquiry for two years it has been possible to check results with a second group of teachers and other hundreds of students.

Carefully tabulated returns thus far available make it clear that the so-called experimental method, outlined above, is not only the most effective in dealing with all students tested, but is most effective in bringing the backward student up to a level of good writing.

The purpose of the directors of the inquiry in thus "publicising" the results of their study from time to time is manifold. They seek to convince college administrators that it is of supreme importance to train *all* students to express themselves simply and clearly in writing; and that this can be done, generally, in the freshman year.

But it must be done by instructors trained for that work rather than for some other; and attention must be concentrated upon the task, rather than diverted from it.

They have pointed out in another of their reports that such classrooms face another danger, not mentioned in this article. Composition work may be converted by over-enthusiastic writing instructors into "vocational training for literature." That *may* be a task for elective courses in later years, but not for Freshman Composition classes. It is the business of freshman year to achieve one desired result for all students—simple, clear expression of each writer's own ideas, in language his reader can understand.

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[1] See "Good Writing: An Inquiry into the Efficacy of the Teaching of Written Composition in American Colleges and a Search for the Criteria of Good Writing." By Burges Johnson. 76 pages. Published by Director of Public Relations, Syracuse University, Syracuse, N. Y. Fifty cents postpaid.

The Emotional Implications of School Practices and Tasks[1]

WITH all due respect for the contributions of psychiatrists, psychologists, clinicians and other specialists to the problems of emotional adjustment and development, it is difficult to see why it is left for an educator to recognize and emphasize the fact that school practices create and complicate many of the problems with which this committee is concerned. To those who are not directly responsible for school practice this may seem like a harsh and unwarranted indictment of the school, but it would not surprise or shock thoughtful educators. It is an essential base for an evaluation of certain serious and current efforts at educational reconstruction, and it has definite bearings on the program of investigation and experimentation initiated by this committee.

To validate the critical and constructive material which follows it may be stated at the outset that the writer was for many years a classroom teacher in public schools, later a special investigator of school practices and more recently director of a university elementary school conceived as a laboratory in which a creative attack on the fundamental problems of educational reconstruction could be realized and studied. This experiment is only one of the indices of a new type of educational leadership which is utilizing the findings of basic research in child development and related fields in making itself responsible for a fundamental redirection of educational thought and procedures.

Too many current practices and features of school organization are responsible for emotional disorders and strains, because they are means of securing some values at the expense of others. Such procedures must be superseded by valid means of achieving related ends without such conflicts. We cannot countenance the employment of fear as a technique of school control and motivation without assuming the responsibility for the consequent worry and other related emotional disorders. Nothing short of a comprehensive and basic functional realignment of the practices and procedures of education in terms of something more intelligently directional than tradition, precedent or expediency is indicated.

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[1] This article is an elaboration of the writer's contribution to the discussions of the Bar Harbor Conference of the Council's Committee on the Relation of Emotions to the Educative Process.

If this committee contents itself with a definition of the problem that centers on the study of emotionally maladjusted children and teachers, its conclusions and services will be significant only on the assumption that education itself cannot be modified to contribute more constructively to emotional stability and maturity. The educational conditions which infringe on children are in a sense climatic, in that the child finds them so inescapable and enveloping that he can only adjust or be at their mercy. But the forces which produce the emotional climate of schools are by no means as cosmic and uncontrollable as are those which interact to make today's weather or the variations which constitute the climate of a geographic region. Within the area of educational concern there is need for an approach to the problem which is more analogous to air-conditioning and thermostatic control in the interests of the inhabitants and purposes to which the school is dedicated. The phrase "emotional climate" may have a limiting effect on our interpretation of the problem, but it may also serve to characterize the changes in psychological atmosphere which constitute the medium in which children live and to which their adjustments are referred. Those whose professional responsibilities involve frequent visits to homes and classrooms are sensitive to the conditions which constitute "emotional climate." They speak of the genial atmosphere, of warmth or coldness; they note signs of tension in the air or the lack of it, of pressures that impinge, of stormy sessions when those pressures break, of children who are forced or over-coddled by hothouse conditions, of emotional smothering or exposure to sudden or blighting or withering sarcasm. They speak of dull days, or bright, of equable or stable conditions or of highly variable ones in which children spend the school seasons of their growing years. These are some of the "elements" which interact to constitute what we may, for purposes of disdiscussion, designate tentatively as the emotional climate of schools.

The climatic conditions of which we speak should favor the emergence of mature personalities in due course of time. There should be no forcing for the sake of premature bloom at the expense of all round development, no artificially maintained dormancy which thwarts or postpones development. It is important, therefore, that every phase of education be paced in terms of levels of maturation and conceived to make its timely contribution to the processes which convert potentiality into development toward maturity. Only when the sequences and stages of learning are spaced or placed in terms of this criterion can education avoid emotional blockings and nervous disorganization that accrue from lack of readiness and successless effort; only thus can education take full advantage of intrinsic drives to conserve the integrity and functional meaningfulness of learning through purposeful doing. Only thus can it hope to reduce the inordinate emphasis on repetitive drill with its disintegrated clutter of unrelated, unassimilated piecemeal elements which are too detached from life to find their way into use for any purposes but recitations, exercises and examinations.

Why should we rest content with attempts to adjust the child to such experiences? What can we infer from the lack of such adjustment problems in schools whose practices are conceived as means for releasing and channeling native drives and developing integrative learning experiences? What can we infer from our numerous experiences with cases whose adjustment is achieved primarily through a change from one school to another which has established an emotional climate more consistent with the ideals of preventive mental hygiene?

It would also seem to be highly important to study and identify the "climatic" conditions and circumstances typically associated with arrested emotional development on the one hand, and with emotional disturbances and disasters on the other. Granted that there are other and perhaps prior causes of emotional instability, educators can hardly hope to be intelligent in dealing with problems of development without insight into the emotional correlates of time pressure, emulation, fatigue, public reproof, isolation, competition, coercion, repression, reward or recognition, punishment, and regimentation. The cumulative emotional effects of continued reliance on any extrinsic force, prod, or drive must be considered in its long range effect on emotional maturity and stability.

Who has not known an adult whose childish dependence on approval or recognition limits his adaptation to the challenges of maturity? Who has not seen the later evidences of early repression in inhibited adults and also in those who compensate by unrestrained licentious living? The extreme unlikelihood and difficulty of readjusting such personalities after they have come of age makes it doubly important that the school examine the practices and conditions which may make it at least partly responsible.

Child guidance clinics and psychiatrists have dealt remedially with individual problem cases. Too often such extreme cases are indices of an unfavorable emotional climate in the classes from which they come. Attention has often been called to the fact that the mental hygiene of the teacher has much to do with the emotional climate of the classroom. An objective understanding of the problems of mental hygiene on the part of teachers is coming to be recognized as an essential of their professional outlook. While this trend deserves encouragement, it should not blind us to the fact that we should also overhaul commonly used school practices and procedures with a view to their effects on the emotional climate of the classroom, and consequently on the developing personalities of all the children involved.

There are teachers and children who must live and work under conditions which undermine their security, reduce their self-respect, and make them cringe with fear or submit without reason to a regimé which has no respect for the sound human relations that should be the major concern of education.

There can be no doubt of the need for substitute procedures in the case of such problems as over-anxiety concerning marks, grades, and promotion. We have set up these modes of report. They are under criticism because they have diverted effort and attention from worth-while ends. They are at the bottom of dishonesty to secure marks and to pass examinations, of subterfuges used to get by. The demoralizing effects of competition on the children who are most in need of encouragement and least able to compete fairly for marks and promotion are only part of this story. They have also another bearing. During the very years in which children should be exposed to the congenial climate of social interaction and cooperative endeavor for the common good, they are systematically exposed to the rigors of competition, sorted into rankings and homogeneous groupings, and regimented into mass action.

During the very years in which flexibility and adjustability should be conserved and practiced with reference to the numerous situations in which it is intelligently desirable, the school too often proceeds to fix habits, to set patterns of behavior, to substitute rules for thought, and external controls for true responsibility.

During the very years in which children could and should learn to budget time with discernment, giving due consideration to the worthwhileness of leisure, as well as work, the school schedule is a predetermined succession of periods, too crowded to do anything but obstruct the rational use of time.

During the very years in which children should and could learn much by exploring their environments and by making such experiences the point of departure for constructive planning, purposeful reading and doing, they are put at verbal, abstract tasks and pre-planned assignments which have no intrinsic meaning for them, and which must therefore be bolstered up with marks, grades, and devices to stimulate effort and interest artificially.

While the youthful urge to serve and have a part in things is at its height, we prevent youth from being exploited by industry and at the same time we fail to provide other maturing experiences which involve responsible conduct. We prolong dependence and encourage irresponsibility by failing to offer legitimate social service outlets which would challenge and dignify adolescence.

While children might be learning to be creative and expressive in a broad variety of media, and to be sensitive to the fine expression of those who have given the world the treasured products of all the creative arts, they are given formal lessons in the technique of drawing or in the reading of music, and practically no experience in the channeling of their own creative drives. Small wonder that they seek escape from boredom and ennui in the commercialized perversions of art, in the movies and in cheap literature, or in more vicious forms of exploitive recreation which dissipate and degrade! Education has not realized the deep significance of creative release and the possibilities of active art experience as defenses against such exploitation, and as bulwarks against emotional breakdown.

While unprecedented conditions are transforming the very fabric of the world into which our youth will emerge, they are too often kept at history lessons which begin and end in the chapter of a text instead of illuminating the perspective which reaches back from the real, present world with its problems to their origins in the changing past.

While science has challenged and transformed almost every operation which affects our lives, and has challenged the exploring mind to attack its problems in the scientific spirit, appropriating and adapting the findings of related fields, we are just beginning to realize that the emotional maturity and the social competency of the citizens of tomorrow are urgent matters of major educational concern.

This concern must deal critically and constructively with those prevailing school conditions and procedures that have any bearing on emotional problems, and it must be done in thoroughgoing fashion. While this is in process, psychiatrists and psychologists must use the very transition itself as a laboratory in which the old and the new educational formulations are compared, and evaluated in terms of their observed effects; improved and coordinated in terms of a general framework of educational values. To achieve this reconstruction specialists must enlarge their backgrounds of understanding by interaction with each other and with thoughtful educators, lest the reconstruction leave out of account some significant factor which one or the other must contribute because of the uniqueness of his point of view and field of specialization. This gives a conference or committee constituted as this one is, its primary validity as a means of approach to the formulation and solution of the problem.

Some of the areas in which reconstruction is urgent have already been indicated. These must be more fully explored if the committee is to achieve its purpose.

Some of the creative solutions of the problem have been suggested and applied in a small number of laboratory schools. These must be evaluated and given wider scope while other creative solutions contribute the essentials of a planned educational economy which does not defeat itself as a result of inner conflicts or reveal its shortcomings in the emotional disorders of its clientele.

Until we arrive at a consummation of this sort, education will produce the emotional problems and maladjustments which arise from its own ineptitude.

Having borrowed from militarism with its autocratic methods of mass control, education will have problems which arise from mass handling, repression and autocratic domination. The emotional implications are obvious.

Having borrowed from factory production, schools will continue to emphasize the product instead of developing the producer. The improvements in process will be mere efficiency measures which make for greater uniformity in the product at the expense of the individuality and initiative on which social progress must depend. Great emphasis will also continue to be put on training for specific tasks at the expense of flexible habits and all round development. Here again the emotional implications need not be made more explicit.

Having taken its cue from big business with its socially disintegrative, exploitive motive, education will give more power to the captains of educational industry. It will undermine the security and integrity of the classroom teacher by restricting her initiative, and making her a mere agent of the powers that be, required to follow a fixed curriculum, to cover the ground and measure up to the standards of the system at all costs, even at the cost of emotional strain to herself and her pupils.

Inspired by the example of modern merchandising and marketing, education will continue to grade, mark, sort, and label its product for purposes of ready handling, segregating the inferior and the superior into homogeneous groups, unmindful of the dire and lasting effects of these procedures on emotional adjustment and personality development.

Recognizing the most obvious analogy, education will become as preoccupied with remedial cases as medicine was before it awoke to the challenge of preventive measures and the social significance of more constructive approach to the basic problems of personal and public health, their implications for infant nurture, and child development. Until then public education will continue to overlook the very years which because of their priority, low immunity and high plasticity are fraught with the greatest hazards to emotional stability. To leave these crucial years to the chances of parental adequacy and the inequalities of economic status is doubtful economy, bad social engineering, and exalts social responsibility for literacy above social concern for physical and mental health.

Education seems to have become mired in practices which are irrelevant to its true purpose. It has acquired a composite burden of further complications from its uncritical acceptance of a psychology rooted in the physical sciences on the one hand, and confirmed by unwarranted generalizations from laboratory studies of annual learning on the other, whereas, education is in dire need of a substructure which recognizes its social purpose and takes the recent advance of experimental biology into account, substantiating them with the pertinent findings of psychology and interpreting them with due reference to their sociological bearings. Such an alignment would have much to do with the solution of emotional problems which now confuse and elude us. It would protect education from the results of superficial thinking and irrational practices which now produce its bad emotional by-products.

Current attitudes toward the class and school size may serve to illustrate the processes by which we have arrived at some of the prevalent educational practices that have a bearing on emotional problems. Has the policy of building bigger schools ever been studied with reference to the effect the herding of overwhelming numbers in school yards and school buildings has on the development of the mob spirit, on the submergence of individuality and initiative, on the emergence of mass methods and mass controls, on the abandonment of democratic principles and the reduction of rapport and understanding between teacher and principal, teacher and parent, teacher and teacher, and teacher and child? Has anyone taken account of the emotional wear and tear that ensues when young children from good homes feel themselves to be mere constituents of an overwhelming crowd, or when numbers pervert or thwart their natural play impulses? Has anyone considered the effect of herding on the morale in school toilets and the emotional problems which may be traced to such causes? Have we recognized the social deprivations and disadvantages that come from conditions which make it necessary to mechanize dismissals and regulate movements by bells and other cues which are not characteristic of life outside the school? Have we related the size of schools to the tendency to police conduct instead of developing sounder modes of social control? Has anyone tried to discover the optimal size of a school with reference to its relation to a neighborhood? No, once a precedent is set we simply perseverate, building bigger schools, more and more of them, contenting ourselves with the introduction of ameliorative measures. We are also prone to building the biggest schools in the most crowded and socially underprivileged districts. We resort to restrictive rules and punitive measures, and recourse to child guidance clinics, courts and other social agencies for the extreme cases, and pin our faith on a formal program of character education to save the rank and file from the detrimental effects of a conditioning environment. We do not seek to compensate for social disadvantages and crowded tenement conditions by a more constructive preventive policy of educational housing and humane group living.

With reference to class size we are not much more intelligent. We still hope that someone may some day discover the ideal class size for all ages, conditions, and purposes, so that we may at least express our deviations from it numerically when economic considerations seem to compel us to use and expand maximal seating capacity as a criterion. Has anyone sought to relate class size to levels of maturity and emotional stability? Has anyone tried to discover the points at which teachers begin to change their methods of control and relate themselves to their classes as masses because the numbers defeat their efforts to maintain social relations and rapport with individuals in the natural uninstitutionalized way consistent with our standards and ideals for out of school relationships? Has there been any attempt to experiment with the subtler educational and emotional effects of departmentalization on various levels? Has there been any attempt to study this subject before committing whole systems to an administrative scheme which gives individual teachers a daily pupil load ranging from one to several hundreds of children, whose educational and emotional guidance is not only disintegrated but subordinated to compartmented subject matter considerations?

All of these questions have a definite bearing on our problem. This indicates the ramifying nature of the causes of emotional difficulties in our schools, and indicates the extent to which a new approach to school practices is involved in their solution.

We must also challenge the prevailing tendency to adopt and continue practices because they contribute to some fixed standard or objective without considering concomitant emotional and psychological effects. A few concrete illustrations will suffice to sensitize us to this shortcoming. We cannot afford to continue a premature emphasis on achievement in beginning reading at the expense of abiding positive attitudes toward reading, or at the cost of numerous so-called failures and emotional disturbances which often have an injurious and lasting effect on the total personality. There is further need for readjusting a reading program which involves visual strain, because it is not paced with reference to the maturation of neural mechanisms for close work involving the fusion of optical images. There are many who consider only brightness and interest in adjusting this matter.

We cannot afford to assume the responsibilities for emotional disorders, warped personalities and physical strain that are incident to the narrowly restrictive traditional school program of the growth level when spontaneity of language use is essential to the development of social attitudes; vigorous large muscle activities are the prerequisites of later emphasis on finer coordinations; and vivid first-hand experiences furnish the material for dramatic play, constructive group effort, and desirable growth of social attitudes, understanding and insight. Here again practices have too often been determined with sole reference to achievement of skill objectives in reading.

We cannot continue to depend on dessicated, atomistic learning exercises in any school "subject" without assuming the responsibility for the child's failure to see relationships, for the paucity of sound thinking, for dependence on didactic direction, and formal instruction, and for the other emotional and intellectual concomitants of a régime in which passive, purposeless aquiescence in directed assignments takes precedence over purposive attack on meaningful tasks.

We cannot afford to speak of the new leisure and the reduction of working hours for adults and continue to confine children in cramped rows of seats and cramped schoolrooms for long days, at the end of which we send them home with required homework, or detain them still longer for disciplinary purposes. How can we reconcile these practices with our enlightened attitude toward juvenile delinquency and child labor, and our advancing knowledge of the importance of happy hours of sunlit play and the maintenance of a regular, early bed time as essential health measures during the growing years? Can school people conscientiously acquiesce when the inevitable forces of conservatism, among which inertia is not the least, foster uncritical adherence to the status quo or regression to practices which derive their sole sanction from precedent and tradition? Can educators disavow responsibility for the emotional problems which arise from the fact that so many of the school's practices have not been formulated or revised with adequate consideration for the scope of their total effects? Can we continue to defend and accept the educational practices which rest on narrow expediency, unexamined premises, time worn precedents, and half-truths which critical informed intelligence has long outgrown? Will we conceive sounder, more inclusive solutions and hypothetical procedures which must challenge educational experimentation, or will we continue to content ourselves with short range remedial measures, minor modifications and adjustments which reveal the cramping effects of our own education and our consequent failure to find new alternatives? The situation must challenge group thinking and individual creative effort of the highest order. It requires leadership which develops the courage and insight of the teacher and challenges her to pioneer in the intelligent attempt to redirect her practices and sensitize herself to their full implications for child development.

It requires patience which recognizes the difference between misguided effort and the inevitable crudities of pioneer attempts to take a new direction.

We must become more critical with impulsive, ill-considered reforms and mere expediencies. We must become more intelligently aware of the related values whose integration into a consistent program gives education a directive purpose and social significance.

This program will become increasingly sound as it is based and rooted in the sciences which have to do with the nature of man as a growing organism, and of his adjustment to experience in a social and physical environment.

What do the new premises of biology, psychology and sociology offer as a basis for an educational program? Biology tells us that the optimal adjustment of a growing organism is achieved through the maintenance of a dynamic equilibrium, in which *all* the ever-changing inner *and* environmental forces are continuously reconciled and balanced in terms of an integrative, evolving pattern.

This is indeed a new conception of growth and adjustment and its bearings on our problem are new.

The science of an education that is passing has little to offer here. It has too often fortified the position of traditions and practices which are suspect in the light of advancing standards of child development and social well-being.

We must build anew and on a new foundation of basic research which recognizes the joint bearing of biological and psychological advance. If the child is indeed a dynamic, purposing organism, and if purposive behavior is the integrative and essential concomitant of maturation and optimal development; *if* the atomistic, mechanistic concept of learning with its overemphasis on external stimuli and their restricted localized effects is giving way to a more organismic concept, in which the creative nature of learning becomes increasingly significant; *if t*he emergence of new differentiations from a less differentiated total pattern in terms of what Coghill calls a growth potential constitutes the basis for an understanding of the developing nervous system; *if* the emotional aspects of mental and overt activity are dynamic and essential concomitants of growth and flexible adjustment; *if indeed* these formulations from the advancing frontiers of scientific investigation have a bearing on emotional problems, are we not challenged to explore their possibilities as criteria for the appraisal and creative reconstruction of pertinent educational practices? The study of social phenomena indicates the increasing need for flexible habits and social attitudes as essentials of survival and breakdown in the inevitable processes of social change, and as safeguards against regression, emotional maladjustment and breakdown.

Here we have, then, a combination of fundamental postulates upon which to conceive and validate educational procedures and integrate them into a consistent program; a program which does not content itself with inflexibility by denying the implications of social change; whose practices do not complicate emotional adjustment by nullifying each other; whose exponents do not evade the professional challenge of responsibility for guiding growth and stabilizing personality.

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German Universities in the Autumn of 1934

THE ideals and the methods of work of German universities have been matters of interest and influence in this country since the beginning of our graduate work. The differences in the organization of secondary education in the United States and Germany have resulted in material modifications in our work at the graduate level. The association of the college and its undergraduate work with the graduate school in the universities of this country has resulted in certain modifications of graduate instruction; but, in spite of these differences, it may be said that the universities of Germany have exerted a material influence on the development and organization of graduate instruction in the United States. In recent years, this country may not have followed the German ideals as closely as was true a generation ago, but that interest was still maintained is shown by the reception given Dr. Flexner's volume, *Universities American, English, German.*

This interest in German universities, on the part of the writer, and particularly interest in the changes that were taking place under the National Socialist government, was the occasion for visiting them during the Autumn of 1934. Six weeks were spent in studying conditions in nine or ten universities. The time spent at each institution ranged from a day to a week. Through the cooperation of the representatives of the Deutscher Akademischer Austauschdienst, arrangements had been made at each university that was visited for such assistance as was necessary for the writer to become familiar with the phases that were of interest with the minimum loss of time. Deputy Minister of Education Dr. Loppelmann kindly furnished a letter giving access to any schools that I wished to see. As has been stated, the primary purpose of the visit was to become acquainted with the changes in the universities that are taking place under the third Reich.

At the time of the visit the National Socialists were only in the second year of their administration of German affairs; and, as might be expected, they were still not entirely clear as to the details of educational policies to be followed in the future. As to some of the main outlines of policy, they had made at least tentative decisions.

Following the World War, in Germany as in the United States, there was a marked increase in attendance in secondary schools and at the higher levels. The democratization that took place at the secondary-school level in Germany resulted in the addition of new types of secondary schools in which less attention was devoted to the classics and more was given to German culture. The Oberrealschule and the Deutsche Oberschule belong in this classification. As a further step in the democratization of secondary education, the Aufbauschule was established. This institution made it possible for the distinctly superior student, who after completion of the foundation school (Grundschule) had continued in the upper grades of the Volksschule instead of entering a gymnasium, to transfer to a program of secondary education and secure the maturity certificate which marks the termination of secondary education in Germany. The maturity certificate was formerly the only credential that was necessary for admission to university study. These changes were accompanied by marked expansions in enrolment both at the secondary-school and the university level.

When the National Socialists came into power, they found that there were many thousands of university graduates without employment. From a social viewpoint, they regarded this not only as an unfortunate situation but as a source of danger. As a result, steps have been taken to limit enrolments in the universities. The Federal Minister of the Interior placed the maximum number of secondary-school graduates who would be admitted to German universities at fifteen thousand for the year 1934-1935, in contrast with twenty-five thousand to thirty-one thousand which were the numbers of new matriculants in the period from 1926 to 1932.

This action naturally raised the problem of selection from those who receive the maturity certificate, which formerly constituted the basis for admission to a university but which is no longer sufficient. Two steps that have been taken automatically limit the numbers of two classes of students admitted—women and non-Aryans. The proportion of women admitted may not exceed 10 per cent of the matriculants. The proportion of non-Aryans is not to exceed the percentage of non-Aryans in the total German population.

Beyond these restrictions are provisions by which new matriculants are allocated to the several states of the Reich on a basis determined by the National Minister of Education, but the total number must not exceed fifteen thousand. It then becomes the responsibility of the state authorities to make a selection of the most promising students not to exceed its allotment and to observe the restrictions affecting women and non-Aryans. The methods followed in Prussia may serve as an indication of the procedure. This state is divided into thirteen provinces; in each province the highest civil as well as educational governmental authority is a governor. Accompanied by the consent of his parents, each applicant for admission to a university submits his request to the director of the secondary school in which he expects to take his secondary-school examination. The director of the gymnasium is required to make an estimate of the fitness of each applicant for university work and to transmit this to the governor of the province in which the secondary school is located. The governor in turn asks the judgment of the district leader of the National Socialists regarding the political qualifications of the applicant. If a governor and a district leader cannot agree regarding the political qualifications of an applicant, the question goes to the Minister of Education for decision. Clearly, this procedure introduces the element of political affiliation into the selection of the new matriculants. As further evidence on this point is the following statement which was taken from a decree under date of November 2, 1934, of the Federal Minister of Science, Education, and National Culture:

"The Reichs-Studentenwerk (National Student Welfare Organization) is legally a public corporation with its seat in Berlin. It has the purpose of enabling every gifted German, irrespective of social or economic status, to attend institutions of higher learning. Its aim is to select the best in accord with national socialistic principles."

In interpreting the selection of students for admission to German universities, it should be borne in mind that the National Socialists are fully convinced that in the past emphasis has been placed too exclusively on the intellectual qualifications of candidates to the neglect of the physical and political characteristics. Those in control hold the view that a more rounded development should be the goal of the program of secondary and higher education in Germany. This view not only enters into the selection of candidates for university study but it is also reflected in activities conducted at German universities. Students are required to take two semesters of physical education; and, largely through the National Socialistic Student Club, provision is made for the political education of the student body in accord with the principles of the National Socialism. The writer formed the opinion as a result of his few weeks of observation that political considerations are a considerable factor not only in the selection of new matriculants but also in the granting of financial aid to students after they are admitted. Apparently these considerations do not control to as great a degree now as they did a year ago. Furthermore, the National Socialists with whom the writer talked were firmly of the opinion that the changes that have been made will not tend to decrease the influence of the German university in the field of scholarship. This writer believes that that remains to be seen.

New matriculants in German universities must not only possess the maturity certificate and be politically acceptable but they must have spent at least six months in a labor camp. This institution, which in some respects resembles the Civilian Conservation Camps of this country, is one of the means that the National Socialists are using to break down class distinctions as well as to reduce unemployment. The prospective university student, in one of these camps, finds that his daily work and recreation bring him into intimate relations with other young men from all walks of life. The intimacy of the camp life is designed to give the future university student a better understanding of and sympathy with the life of the average citizen. This work in social education is continued during the student's first year in university through life in a house of comradeship or in a fraternity (corporation). In either case specific attention is given to the development of his social and political interests and sympathies. As a means of further preparing the student for the duties of citizenship, he is required to be a member of the German Student Union and of a professional guild (Fachschaft). Among the activities of these guilds are the cultivation of relationships between students and those in professional life, the organization of instruction for adult workers, and the opportunity for a much larger measure of student participation in the determination of university policy and action than is to be found in the United States.

The present day leaders of political Germany desire that the universities shall be brought much closer to the daily life and needs of the people than has been true in the past. This might be inferred from what has already been stated regarding the selection of the new matriculants and from the organization of student life. This view manifests itself in the statement that was frequently heard to the effect that a new type of university professor was needed. He must be an individual who is not interested alone in his field of scholarship and research for its own sake, but he must, like the student, be an "all-round" individual. He must have an active interest in the political life of Germany and of "Volk." The extreme emphasis that is placed on nationalism in Germany at the present time is almost certain to mean the diversion of a great deal of the energy and ability of German faculty members from what have been their research interests to the more immediate needs of Germany.

Changes of great potential significance have been made in the administrative procedures. The rector (president) of a German university, instead of being chosen by the Senate and approved by the Minister of Education as was formerly the procedure, is now appointed by the latter. The discussions of the moment seem to indicate that, instead of being chosen for a term of a year or two, the Minister of Education will appoint the rector for a relatively long period. In the appointment of new professors, the relation of the faculty is advisory, and the final responsibility rests with the rector and the Minister of Education. The extent to which the rector takes the faculty into his counsel is an individual matter. In general, it may be said that the Senate's relation to the academic control and management of the university is now limited to an advisory one. In this respect student body and faculty are on the same basis, as students have an advisory relation to the rector in the making of new appointments and in the determination of policies so far as they are matters of local decision.

The writer was informed on good authority that the students have been able to force the resignations of professors when they felt that these faculty members were not loyal National Socialists or in some instances when they did not approve of the quality of their instruction. There does not appear to be as much evidence of activities in recent months as was true in the earlier days of the National Socialists. One should not infer that this apparent change is entirely due to less aggressiveness on the part of students. Some of the most outspoken faculty members were undoubtedly forced to resign in the early days and others may have accepted the dictum that "discretion is the better part of valor."

It is very difficult to form any adequate estimate of the extent to which faculty members in the German universities have been obliged to subordinate their views to what at the moment is the only political party in the country. It is true that regardless of "race" some of the ablest professors have been forced to resign because they would not fully subscribe to the principles of National Socialism. In some instances individuals in this group have been taken back; and, at the moment, the political leaders seem to be more judicial in their attitude than was true in the early months of the National Socialists' régime. The writer, however, does not believe that anything that approaches academic freedom can be said to obtain in German universities. Furthermore, the present administrative organization of the universities makes it relatively easy for political leaders to control the personnel and policies of these institutions, if they wish to do so. Believing as the writer does in the necessity of freedom of thought if intellectual progress is to be assured, he is very much afraid that the present political régime of Germany may unwittingly give progress in scholarship and research throughout the civilized world a serious set back by exploiting the universities for party ends.

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The Universities as Trade Rivals

AMERICAN universities and colleges are unquestionably out for students. Big and little, they are working for acceptable undergraduates who can pay or whose qualities of scholarship and personality seem likely to attract others who can pay the tuition, fees, and other charges.

In town after town, alumni chapters are being formed or revived, are holding promotional dinners, are breaking into the newspapers, and are helping to secure students. Traveling deans are on the road drumming up academic trade for next year. Faculty leaders are being drafted to speak free of charge before neighboring and distant audiences. Sandwiched in, between speakers and admissions offices, an occasional college president himself is encountered vigorously visiting high schools, hundreds of miles away from his own campus. Everybody is using scholarships, (1) to attract honor students, who will build *alma mater* a bigger and better drawing reputation, (2) to attract "leaders" and athletes who are always A-1 hometown publicity, and (3) to assist a few of the poor but able candidates who occasionally have to drop out of the race, thereby lending further truth to the charges against the "rich man's colleges."

One dignified college is apparently using a simple bonus system, allowing to old students a tuition credit of one dollar for each new application they bring in and a credit of ten dollars if the applicant enters. Another ingeniously avoids the coarser appearances, but expects holders of scholarships to bring in prospects whenever possible and to turn in the names of all who should be placed on the mailing and visiting lists. A third mails out attractive bulletins for high-school bulletin boards announcing the successes of the high-school alumni now on the university campus. And still others send out their glee clubs on the annual Christmas promotional itineraries, carrying smiles and snappy songs to cheer the hearts of old graduates and friendly patrons—with chartered

Pullman cars and scheduled stopovers. Detailed devices and follow-up plans are probably numerous enough to provide material for a thousand-page dissertation on "Resourceful Suggestions for the Student Recruiter."

The trouble is that the colleges need money at a time when moneys of all kinds are scarce. Not unusual, therefore, is a disorganized force of 20 or 30 "promoters" employed to gather the news and disseminate it, to write letters, to travel, make speeches, organize alumni, and interview prospects.

An acquaintance now engaged in this type of recruiting work is supplied with a nice travel allowance that stretches from coast to coast. Indicative of the increasingly severe competition for students is his experience in a large high school several hundred miles away from his own campus from which he is sent out to "admit" students. Although his visit was as early as November 1, he was the twenty-second college representative who had arrived that fall, the principal told him. Each representative was recruiting a college class for the next September from high-school seniors who would not graduate until the next June. "You just haven't a chance at the best students," says this officer, "unless you have a scholarship to offer them. Whether they need the money or not they expect it, because so many institutions are after them."

Equally shrewd and obvious promotional use is also being made of intercollegiate athletics. Football, recently said to be on the wane, which big-ten presidents have threatened to demote, is now reported to have staged a revival. If prosperity returns, the stadia will have to be enlarged, people are saying. And why?

"Well," replies a physician whom the writer sometimes meets, "why not? It is all a big racket, of course, but nearly everything else is. It's just honest business; and if you can pay your bills that way, you don't have to beg for money."

"Here is the truth about football," another of my acquaintances tells me. "We alumni want a winning team for the simple reason that we don't like to be embarrassed publicly by a bad one. We go out to a party, and the first fellow we see says, 'What a bum eleven! Must be a rotten school.' "

And so it begins to look as if the universities really are in the show business, after all.

II

As many persons believe, these conditions are not safe ones for non-profit, educational institutions to wink at—invested as they are with an important public trust. Given time enough, such activities will raise serious quesion about the educational integrity of even the greater universities.

In this connection certain facts should be clearly understood. In the first place, these are nationally known institutions about which we are speaking. They are not jerk-water colleges and not educational pirates, but several of the more conservative American colleges and universities. Anybody with university experience will recognize that these energetic practices are not new, do not constitute any suddenly revealed chicanery of college administrations, and have only been increased and emphasized by the depression. It is merely that the universities and colleges are fighting a little harder for revenues. Caught along with other institutions in the nexus of the depression, their faculties have already been forced to let many of the "younger men" go, two hundred here, a hundred there, twenty-five somewhere else. They had to do it because income from endowment has fallen off and revenue from tuitions has shrunk with falling registration and decreasing ability to pay fees.

In most places all faculty salaries have been substantially reduced. Whether voted as a voluntary return or bluntly levied as a *pro rata* cut, the necessity behind the action has usually been unmistakable. There simply was not income enough to support former levels.

Already some old-time reactionaries are suggesting the return of higher education to the proprietary basis of: collect all you can from students and distribute the proceeds to the faculty. One well-known university was reported in the public press to have adopted the proprietary plan a year ago, apparently allowing each teacher a portion of the tuition paid by the members of his classes. The issue is a very serious one in view of what may happen to destroy institutional morale and efficiency in the many cases where the size of class enrollments does not bear any important relation to the value of the contribution which a gifted scholar may make to the educational life of his college.

In view of the seriousness of their whole financial situation, consequently, there is no reason for anyone to engage in writing diatribes against the colleges because of their active promotional efforts, however much he may deplore them. Brutalizing to some extent they inevitably will prove; painful in the extreme they are sure to be to men of good taste and high ideals. For the flower of American universities to use even the relatively more harmless and superficial methods of the chiseler or of the shrewd dealer is certainly going to be a difficult shock for the public to absorb.

Yet the present development of aggressive methods in promotion should not be surprising. Why should the institutions which have developed modern thought, as a conscious reaction away from philosophical idealism, not apply it themselves in their hour of peril? What have the universities meant by building up and teaching theories of pragmatic, realistic, and relative ethics, methods and technics, if they intended never to employ them to further their own purposes? To most civilized men, moreover, knowledge in the arts and sciences, in medicine, surgery, dentistry, engineering, and the other specialized pursuits, seems well worth preserving even at the cost of realistic struggle and calculating drives for support.

And it is also probable that distasteful promotional devices are not to be considered dangerous on the mere ground that they are distasteful. The potential dangers are deeper and include at least three possibilities: first, failure skilfully to design all promotional methods or devices, that are to be used, directly in relation to the long-run educational ends and results desired; second, outright neglect to make any clear and comprehensive statement of a body of specific educational aims;

and third, adoption and pursuit of a body of selfish, shallow, or otherwise inadequate and even pernicious objectives. In any of these ways, but especially in the first and second, educational administration is apparently failing to do what it should. As a consequence, it may not enable the realistic mind of the time to invent suitable promotional devices by which to drive straight towards really important educational goals.

III

Since the colleges and universities are active rivals for students, then, and since their promotional methods are becoming more direct and businesslike, it is quite in order to raise the question: How did they happen to get themselves into such a position and what are some of its possible implications?

The answer is not a very difficult one to outline. For several decades university and collegiate institutions have been governed by boards of trustees composed largely of business men, financiers, and their legal associates. Their presidents and promotional officers are often members of this same group in spirit and outlook if not in actual training and background. As a result, higher education has fashioned at least a part of its promotional theory and practices under the direct influence of contemporary business enterprise. This outcome should not be surprising to anyone because university trustees are after all the same men who run the oil, banking, manufacturing, newspaper and other businesses of the country. As trustees in non-profit educational enterprises, their financial actions are undoubtedly more philanthropic than they are in ordinary trade. Yet, aside from philanthropic motives of this kind, it would not be reasonable to suppose that they could in general exercise greater managerial foresight and wisdom in solving the problems of the universities than they do in solving those of their own business.

Hence—and it is not said to discredit trustees who are generally sincere, self-sacrificing persons—the institutions of higher learning are suffering from many of the same ills that have beset business in general, namely (1) mal-utilization of funds and excess capacity, (2) absence of clear purposes beyond the vague desire for growth and financial prosperity, (3) neglect of the possible long-run effects of loose promotional activities both upon national character and upon the reputations of the very institutions doing the promotion.

(1) *Mal-utilization of Funds and Excess Capacity.*—The capital of a university includes campus, buildings, libraries, all kinds of equipment, its good will, and especially the members of its faculty whose services constitute its chief stock of marketable values. The ratios which most of these items bear to each other and to the whole enterprise, however, are almost never carefully planned in advance by competent persons.

One by one, hit or miss, various funds or properties have come into the possession of almost any given institution as bequests and legacies over the time, amount, and purpose of which the institution has had too little if any control. But once they are entered on its books, even though represented by little needed buildings that yield no return, the average university seems to feel that it must in some way or other obtain enough annual income to maintain them.

It is safe to assume that nearly all colleges and universities have recently experienced some decrease in current dollar income. To meet this problem of reduced income the first natural reaction of administrators probably is to reduce expenditures. But only a comparatively small proportion of the faculty can be cut off without reducing the quality of teaching or research activities; and faculties generally oppose the reduction of personal dollar income, anyway. Meanwhile, buildings have to be maintained, that is, cleaned, heated, lighted, and repaired. On many a campus, moreover, where building needs now seem to have been oversupplied, it is the maintenance cost of one or more comparatively unnecessary buildings that really causes a large part of the trouble in balancing the budget. At the same time, there is no possibility of a college president's doing anything to increase stock dividends or interest on bonds, but there is a strong possibility of his increasing tuition receipts by beating the bushes for more students. And so the situation itself is forcing the institutions to take the only comfortable way out and become rivals in dead earnest for students.

About this whole financial situation, loose critics are often tempted to charge off-hand that the colleges and universities are overcapitalized either in the accounting sense that they have set higher values on their possessions than current income can support, or in the economic sense that they possess more capital goods than are needed to do their educational job. Strictly speaking, however, the difficulty is commonly not one of overcapitalization, but rather of mal-utilization of funds, often of *disproportionately large investments in fixed capital* causing at least temporary excess capacity in plant and equipment. In other words, while it may be possible to shrink the current inventory of faculty services, this is not so true of fixed assets because a building is a building even when it is not needed. Few men have the heart to blow it to pieces or to refuse it in the first place. And as a result the institution loses not only the cost of its upkeep, but also possible return on the original investment which might have been used to build up an emergency reserve in government bonds or cash funds. If this had been done, however, by everybody and on a national scale, rivalry for students would not now be so ardent. Yet for any one institution to have held off by itself might very well have been for it a course of suicidal virtue.

Only a few years ago a cant phrase of college administration was that a college without a deficit was not worthy of the name. Perhaps it would not be so questionable an idea today if one could be sure that all these deficits had been incurred for really educational purposes likely in some way to prove socially beneficial. But often they appear to have been only the sinister reflection of the high cost of operating an increasing group of static family memorials.

Many a small general donor who once had noble visions of helping ambitious poor boys through college now sleeps silently. His stocks and bonds strike bottom and the diminished returns are needed to heat, light, sweep, scrub, and repair unnecessary buildings full of corridors and well-heated rooms that are empty a large part of the year. It has all been said so often that it is very trite, but nobody seems to do much about it.

A situation of this kind is not healthy. The colleges have become proprietors of public parks and keepers of memorials —laudable but not educational occupations. Because of the high expenditures for maintaining these superfluous functions, they are now pinched for enough financial resources to maintain a sound current inventory of professional service, of libraries, laboratory supplies and equipment, and to provide cash scholarships for the impecunious. To put it bluntly, the investment in buildings is too great; part of it, as already stated, should have gone into very conservative securities to yield reserves and working funds for lean years.

Right here is one of the main reasons for feverish promotional activity and the drive for students. Since new endowments are not pouring in to save the day, tuition-paying students present and future are being stalked. And unless some corrective action is taken—and this is the discouraging part of it—the colleges will fall into this situation in every future depression. Shameless promotional schemes and cumulative makeshifts will become ruinous.

Mal-expenditure, to be sure, is a relative condition which is hard to define, albeit one which certainly operates (1) when resources of any kind are held in excess of needs for research and teaching after allowing for reasonable growth, and (2) when the costs of upkeep for physical plant are so great that they force the college to lower the efficiency of faculty personnel through regrettable retrenchments in numbers and equipment, or (3) when these costs interefer with the lowering of tuitions or the supply of scholarship aid for the needy but gifted student. Society is not being effectively served and investment ratios are indefensible whenever these conditions occur.

But, what are "present needs?" What is "reasonable growth?" What type of "faculty service" is needed? How many scholarships ought to be given? These questions raise the problem of developing a suitable body of educational ends to guide all promotional work.

(2) *Educational Aims.*—An accompanying difficulty, then, aggravating that of mal-expenditure of funds, is that most universities and colleges have not developed any well-defined body of comprehensive aims, either individually or in common with their neighbors, by which to guide their investment policies and towards which to bend their realistic promotional efforts. Vaguely they all wish to grow and prosper and to receive wide recognition in as many favorable ways as possible, but actually they have so far failed in applying to their work detailed knowledge of their own educational obligations both to society and to the individual. If anyone really doubts this conclusion, let him make an appointment with his dean to go over a considerable body of questions bearing on educational aims—for example these:

1. What geographic areas and social groups do we intend to serve? How many students a year do we, and should we, expect from each? How did we reach this decision? When was it carefully reviewed?
2. Just what educational services might these areas and groups reasonably expect from our college? What are their underlying needs in the way of language, science, philosophy, of professional training, popular dissemination of certain bits of knowledge, adult education for graduates and for underprivileged but ambitious men and women?
3. How many students should we plan to graduate each year in order to render these services, and when will this number simply equal the annual number of replacements required in view of the present rates of such series as, (*a*) death and retirement, (*b*) growth of population, (*c*) mechanization of processes, (*d*) enlargement of professional skill and knowledge?
4. What percentage of our graduates returns to live in their original areas? What percentage does not? Is this a result of our unconsciously biasing their minds or is it a result of early predilections or of rational purposes?
5. To how many persons should our institution plan to supply an education at reduced rates? What is the most satis-

factory basis upon which to arrive at this figure? Where will they go if not to us, and what will be the social gain or loss if they simply fail to obtain further education?

6. In view of the falling rate of increase in the demand for students with technical and professional training, and with the inability of the college student to find ready employment at satisfactorily high salary, are we faced with the problem of developing a general layman's curriculum of an advanced but quite non-professional and unintellectual character? If not, what is to be done with the increasing load of mediocrity, which our own financial needs and social pressure from without, are forcing us to carry?

7. What will be the future modes of life of ordinary laymen and their means of gaining a livelihood? Does the practical welfare of mankind demand that they receive education far in advance of that required for their simple vocations? Should it not resemble the general education picked up more or less incidentally by a scholarly or professional student during the course of his university career?

In no sense complete, this list of questions about aims and purposes indicates the type of decision that has yet to be reached in some manner before really intelligent means for promotion can be set up. Once we decide upon the exact work to be undertaken, then we can lay plans. But until we have that kind of knowledge to build upon we are likely to follow that famous business man in the play whose slogan was, "spit and trust to the force of habit."

Surely no one can escape seeing that this problem is as hard as that of untying the Gordian knot, that its implications are far reaching and that they are closely related to the Utopian ideal of a planned economy—something easy to debate about, but so far impossible to achieve. On the one hand, there is the unquestionable danger that university trade rivalry will prove very destructive and wasteful of resources. But, on the other hand, there is perhaps an equally solid danger that the universities will stubbornly resist all attempts to plan their activities according to specific and orderly purposes. In this dilemma it will be no easy task to harmonize individual and local interests in some large collective plan. Foreseeing harsh results—restriction of the idolatrous freedom now so fondly supposed to exist in free choice of a college, free choice of instructors, free choice of electives, and in generally vitalistic self-propulsion through life—students and faculty together are likely to reject any socially planned program. But if they continue as they are the long-time outlook is, to say the least, disquieting.

Meanwhile just suppose that the ordinary run of university administrators remains comfortably indifferent, that they show no more intention of answering these questions and so of "stabilizing" higher education than business leaders show of stabilizing business. Suppose they continue to say something about like this: "We are here to give an education to all who can pay for it and to a few others who can not. We desire the best faculty and the best students in the country. We will try hard to get as many students as we possibly can, especially in hard times when money is needed. We will leave it up to the drift of the times, and to the haphazard blunderings of anybody who happens to take a hand, to decide just what direction we do face on these issues. After all the universities are so strong that nothing serious can happen to them."

It would be and probably it is impossible to do anything in a collective way towards developing and faithfully following a carefully drafted body of educational aims. Pondered abstractly such complete indifference and incompetence seem unbelievable. Yet it is this inability to obtain collective, intelligent action from our leaders that is forcing western society (from trade associations to national government) to submit to dictatorship.

(3) *Modern Promotional Methods.*—Up-to-date promotional methods in use among the best-known American universities employ screen, air, press, house organs, special booklets, leaflets, direct mail, public addresses, musical entertainments, contests, personal solicitation, and alumni influence, quietly and by indirection. Often in the hands of fast-learning novices, but oftener in the hands of competent professionals, in some cases assisted by national advertising agencies, these well-

known media are by no means played upon in any hesitant or amateurish manner. Mechanically the results are impressive. An occasional "story" is reported as making several thousand publications, no mean record for the best syndicate in the country.

The trouble is that all this annoying machinery is too frequently guided by the bread-and-butter opportunism of the present; that is, by the need for students and the desire for acclaim. It is, therefore, an ill-calculated process. And so any sound advice on university public relations must call attention to the possibility of a cumulative undermining of the influence and good name of all higher education sometime in the future. If these virile methods are not coordinated and brought into line with long-run objectives that are comprehensive, well defined, and socially respectable, they cannot yield the kind of cultural returns which the bar of history will one day demand of the institutions by whom they are employed.

Undoubtedly these methods will not be driven out of the university field. Moreover, with so large a part of popular education, the cultivation of public taste and of mass ideals, already left by default to the aggressive forces of commercial advertisers—it is clear that these potent methods should not be relinquished by educators. They constitute realistic instruments, and they are ours to utilize for unbiased education of the public, if only we do not abuse and destroy them. When Billy "this" and Tommy "that" are on the "air" every night in disgusting playlets to sell branded tidbit "this" and labeled muscle-builder "that" (whether it is the best thing to eat or not), who dares deny the universities full access to the same potent media for nobler purposes—if it is clear that they really have such purposes?

Surely mere student-getting and thirst for acclaim are not to be counted as such nobler ends. And, as we have seen, there is no bright prospect of our receiving as a body and subscribing to a comprehensive statement of those ends. What then can be done?

As an interim makeshift, these aims have at various times been urged as a guide for university promotion:

1. Interpreting the University to the non-academic public without whose sympathetic support, all education would be in jeopardy.
2. Making friends and alumni better informed about the *educational* life and development of the university.
3. Broadening the legitimate and indirect appeals for students by making known what important advantages each college has to offer.
4. Building up public recognition of the faculty and the university as constituting a cultural center.
5. Better serving of the social obligation of the university to help educate the common man, keeping him informed of the significant advances made in human thought. (Some deny the existence of any such obligation.)
6. Partial assumption by the university of the function of reward in the life of a student and his family.

But these are only makeshifts. They leave unsettled the problem of ugly rivalry, the central evil which the Federal Trade Commission and NRA codes combined have not yet solved for industry.

Perhaps for this very reason most educators would still agree that a large amount of competition and promotional rivalry is necessary for the sound health of universities as well as the nation's business. "Let the fittest survive" is the slogan, a loose idea which quite ignores the possibility that the most useful colleges are not superficially the "fittest." With an expanding population and growing wealth and abundant opportunity for all who would practice frugality and patience no longer in rosy prospect, we are forced to consider that what one person or group gets there is an increased likelihood of some other one's losing. Thus students who might leave St. Louis to attend college in Philadelphia simply because some Philadelphian had offered them scholarships in the hope that they would prove financially profitable investments are lost to Chicago, Cleveland, or St. Louis for no apparently sound reason. Of course, those colleges who feel themselves adversely affected might make reprisals, as is commonly done in business, on the familiar ground that liberal blood-letting is the surest protection from enemies.

From history one is reminded how the monasteries and not the universities were once the repositories of learning. Much as St. Bernard and plenty of others foresaw, there were destructive forces at work inside the monasteries which could not fail to pull them off their course and destroy them, despite their better works and higher cultural integrity. They became the rich, powerful, envied operators of vast expanding estates; and in England at least they fell before an aggressive political regime. Yet Benedict's original colony could have excited the covetous eyes of no group. Its immediate successors were towers of influence in barbarous times, and would be fairly easy to defend in most periods of history.

For public relations experts here is suggested the apt warning that when institutions which exist for humanitarian purposes permit too many abuses of and gross deviations from the essential ideas on which they were founded, respected, and built up, it is almost impossible to defend them. Of course there must be allowances for change and "normal development" in a changing order. But old aims can not be discarded safely without *the positive substitution of new aims* socially sound enough to preserve their followers and clear enough to guide promotional efforts.

Incidentally, bankers, whose institutions in the past have occupied a position of high trust in the life of the average man, have just had these lessons brought home. Advertisers who have become the active molders of public taste and the self-appointed directors of popular education have studied them with pained surprise in the Printers' Ink Statute and the impending revision of the Food and Drugs Act. Probably the universities have not gone far enough to be in immediate danger of this kind, but a repetition of the last fifty years with increased emphasis on the loose, indiscriminate, and unrestrained recruiting methods now in vogue will strike them hard.

IV

Doubtless public institutions like governments must at times operate on deficits—otherwise they could not possibly perform the work demanded of them. Too often, however, the majority of their deficits and financial worries have been incurred either to erect or to support campus monuments, rather than teaching and scholarship. Promotion, consequently, has been ill-guided tending towards showmanship which is antithetical to sound scholarship. Though practiced by only a few, this superficial type of showmanship inevitably leads to strong rivalry because everybody is finally affected and feels it necessary to take adequate protective measures. Hence social competition, rather than individual error, is the ultimate difficulty; and it can not be solved excepting by common action.

It all simmers down, in the end, to the impersonal administrative task of working out a satisfactory body of aims and policies together with a correspondingly harmonious course of action for all institutions that are to remain in operation. These are common problems, not those of any one college or university alone. And it is well to add that suitable machinery for the solution of such large problems does not exist anywhere.

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Bucknell Cumulative Literature Tests

STIMULATED by the Pennsylvania College Study of the Carnegie Foundation, Bucknell University has adopted during the last three years a new administrative set-up and a revised curriculum. The separate departments have been consolidated into five groups. The Lower Division work of the first two years has been centered about a series of introductory courses in English, literature, history, natural science, sociology, economics, philosophy, psychology, religion, music, art, and hygiene. A comprehensive examination in the required work is being given at the end of the second year. The requirement of a reading knowledge of a foreign language has been substituted for the old course requirements for the degrees of A.B. and B.S. in Biology. In connection with the work in English and foreign literatures a new type of objective test has been developed.

The cumulative test plan is based on the ideas that objective tests, while most applicable to wide fields of knowledge, can be adapted to testing the work of particular courses, and that by means of such testing students may be led to regard each course studied, not as a separate unit, but as part of an organized whole. Though it is completely objective in form, the cumulative test is in the nature of a compromise between the old-type course examinations and the new-type comprehensive tests. The sections of the cumulative tests are particular for individual courses, but cumulatively comprehensive as regards the total number of courses in any literature which any student may have pursued.

The English testing program at Bucknell begins during Freshman Week with a Placement Test. This is confined to compositional skills, and includes sections dealing with spelling, punctuation, grammar, sentence structure, and vocabulary. A reading test also is given at this time. On the basis of these tests students are assigned to graded sections. At the end of the semester the first instalment of the cumulative test is given. Those students who have pursued the course in composition are given another form of the Placement Test. The others are tested on both compositional ability and mastery of the work in literature. The tests are uniform in length, each student being asked to mark objectively about two hundred items; but the content is individualized. Students who have pursued only the regular course in World Literature are given one hundred compositional items and one hundred fifty literary items to mark. Students who have pursued an additional elective course are given twenty-five questions on that course as substitutes for twenty-five of the World Literature questions. At the end of the second semester the number of items covering the first semester's work is reduced so that emphasis may be placed on the work of the second semester; but questions on the first semester's work are included in this and all subsequent tests, so that so long as the student elects work in English he will be examined not only on the course he is taking currently but also on all previous courses in the subject. The total number of items is kept always the same, so that the various tests will have a degree of comparability.

Five forms of the English Placement Test and three forms of the Cumulative English test have been printed, and it is planned to develop a total of eight forms of the freshman sections of the test, six of the sophomore sections, and four for each section dealing with an advanced course. When this program is completed, there will be no repetition of questions asked any one student in successive years. The questions are all of the multiple-choice type, and they include those testing judgment as well as knowledge.

It is thought that not more than half of what we are trying to teach in composition and literature can be tested objectively. Consequently the essay-type examinations are continued at the end of each semester course. The Cumulative Tests are given during the last class period before the examination period, so that the results may be available by the end of the semester. The use of the Cumulative Tests reduces the emphasis upon the essay-type examinations, for the objective test and the other are given equal weights in making up the students' semester grades in the subject, and both taken together are allowed to count for not more than one fourth of the final average.

The scoring of the tests is done by clerks, and the assignment of grades in English is made by the group chairman. Two interesting results follow incidentally from this procedure. The instructor no longer has the final responsibility of fixing the semester grades in doubtful cases, but may allow this to be determined automatically by the Cumulative Test. Increased uniformity in the grading of students under different instructors in multiple-section courses is a second result of this practice. Lists are posted each semester showing the order of ranking (without scores or letter-grades) of all students taking the Cumulative Tests. The element of competition thus secured furnishes a valuable incentive, to which students have responded.

It is planned to introduce Cumulative Tests of a similar nature in all foreign literature courses. Two experimental French forms have already been prepared and tried out. The complete test in this case includes one hundred twenty vocabulary and grammar items and two hundred eighty literature questions, only eighty of the latter being answered by any one student. The Cooperative French Tests are used during the first four semesters, in courses in which the instruction is predominantly linguistic, the Cumulative Test being substituted for these in the advanced courses.

While students are not, in general, fond of examinations of any kind, they appear to like the objective type better than the essay type. Many of them seem to consider that these tests are a better indication of their attainments than are the old-type examinations. How much reviewing of courses previously pursued students have actually been led to do in preparation for the Cumulative Tests has not been determined. They are not encouraged to make special preparation but simply to study each course as a part of a unified program—a part upon which they will be periodically examined as long as they continue to take literature courses at Bucknell. No serious objections have reached the group chairman from either students or teachers. The former sometimes resent having their grade in an advanced course lowered because of poor work done in some previous course, but they realize also that the opposite result may be attained—that good work in any course will strengthen their position in every literature course studied later.

One of the undoubted values of the comprehensive objective test lies in the fact that it covers a multitude of items, some of which the student may have learned from his independent reading instead from any particular course. Students thus tested must surely come to regard any field of study as wider than any one course or even all the courses in that subject. But, if comprehensive examinations are relied upon too largely, there may be some danger of going to the other extreme and minimizing the value of the subject-course. The latter is not, to be sure, an end in itself; but it is a valuable means of progress toward the true end—mastery of a field. A recognition of items in the heterogeneous mass constituting any comprehensive examination is not, on the other hand, either an end in itself or a very definite means of progress toward the end. The purpose of that part of the study of literature that can be measured by the new-type tests includes the development of ability to think both creatively and critically about what one may read. The essay-type examination is too narrow in its range, and the comprehensive objective test is too scattering. The Cumulative Test may prove to be our best single means of stimulating and testing the student's attainment, both by work in course and by independent study, of the desired mastery.

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A Program of Demonstration and Research

THE State Superintendent of Public Instruction, Dr. Paul F. Voelker, called together in Michigan one of the first of a series of commissions which has been called in various states to give an appraisal of educational objectives and accomplishments and to plan for future progress. The Michigan Educational Planning Commission consists of officials of certain influential state organizations representing agriculture, business, education, industry, and labor, and certain organizations of women—a group made up largely of *laymen* but which has asked prominent educators to supply technical information and to sit with it in an advisory capacity.

It was the feeling of this group that it would be easier for the schools of Michigan to serve present-day needs if teachers and administrators were more conscious of the fundamental goals of education. Early last spring, a questionnaire covering a variety of points of view on the subject was prepared and sent to the members of the Commission. A committee was then appointed to give further consideration to the statements formulated. They discussed vigorously and exhaustively the many aspects of the problem and formulated a series of statements expressing what seemed to be the major objectives of public education. These statements were again circulated for criticism and improvement, and were again revised. They were then presented to various organizations, both lay and professional, and requests were made for suggestions for improvement. For a period of six months, the *Goals of Public Education in Michigan* were discussed, analyzed, criticised, re-formulated, modified, corrected, and repeatedly revised. The Michigan Educational Planning Commission discussed the *Goals* in detail at four of its meetings. On June 22, 1934, the *Goals* as finally formulated were unanimously endorsed by that body. Soon after that date, they were officially endorsed by the State Board of Education and other educational groups.

These goals are briefly stated in the following words:[1]

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[1] The complete statement in printed form can be secured by addressing the Michigan Educational Planning Commission, Box 342, Lansing, Michigan.

1. To cultivate a deep regard for democracy and an intelligent appreciation of democratic institutions.
2. To develop those qualities of character which are of special significance in a democracy.
3. To develop the willingness and the ability to cooperate effectively in a democratic society.
4. To develop the ability to use the most effective and reliable methods in searching for truth as a basis for the discovery and solution of problems.
5. To develop the effective use of the fundamental knowledge and skills required by all.
6. To insure an abundant social and individual life in accordance with each individual's capacity and ambition.
7. To provide training in the specialized and professional services which are requisite for society.
8. To provide for the enrichment of adult life.
9. To plan for the continuous appraisal and readjustment of the educational program to fit changing conditions.

Several steps have already been taken toward the realization of these goals. One of these is the launching of a program of demonstration and research which is sponsored by the State Department of Public Instruction in cooperation with the Education and Law Conference.[1] These projects are part of an educational movement which was planned originally as an experiment in character education for combating delinquency and related maladjustments among the youth of the country. The work of the Education and Law Conference has since been broadened to include an interest in the educational process as it is related to the total development of all children, with the thought that attention must be given to the educational process in its entirety if maladjustment is to be eliminated.

The plan of procedure and statement of principles for the program in Michigan have been prepared under the supervision of Dr. Voelker, State Superintendent of Public Instruction, and President John A. Randall of Rochester Athenaeum and Mechanics Institute, who is executive-secretary of the

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[1] The Education and Law Conference was sponsored by Senators Royal S. Copeland, Arthur H. Vandenberg, and Louis Murphy of the United States Senate Committee for the investigation of crime and delinquency, in cooperation with the American Council on Education.

Education and Law Conference, with the help of those responsible for the directing of the projects: Dr. Kenneth L. Heaton, director of the bureau of curriculum and guidance of the Department of Public Instruction; Dr. E. L. Austin, head of the department of education of Michigan State College; Dr. Willard C. Olson, director of research in child development at the University of Michigan; Dr. C. E. Spain, executive vice-president of Wayne University, and Dr. Roy F. Street, director of mental hygiene of the Ann J. Kellogg School. Drs. Austin, Olson, and Street have been loaned to the Department of Public Instruction for half-time service to the program during the present year. The five men sit as a board in the directing of the program. They make possible the pooling of experience and the generalizing of results in the various centers. They are responsible for sponsoring needed research and for coordinating the Michigan projects with the national movement.

A PLAN OF PROCEDURE

With the feeling that educational practice tends to lag behind the knowledge already acquired by leading educators, the first interest is in demonstration rather than in research. The hope is to have, at various points throughout the state, centers (or "spearheads") in which faculty groups will appraise present practice in a particular educational unit and will, in terms of our best knowledge of what education should be in that unit, evolve such changes as are necessary to make it an effective demonstration. To the faculty group sponsoring each project will be available the help of two types of consultation service: (1) from the Department of Public Instruction group, as much help as is needed and desired, and (2) occasional help of experts from within or without the state to make contribution on special aspects of the program. When present knowledge must be supplemented by the findings of new research, such will be sponsored or an effort be made to find someone who will sponsor it.

Certain general policies will be observed in the development of these projects, such as:

1. In order to secure the thoroughness necessary to such a project, the beginning will in each instance be with a small unit and with a limited number of students.
2. The beginning will be made with a relatively small group of faculty and staff members with others brought actively into the program as the project expands.
3. The process is to be stimulated and directed from within the local faculty group with outside assistants serving only in a consultation capacity.
4. Each project should be so organized that the restructuring process will continue after the experimental or demonstration period.

The future development of this program depends upon the supply of available leadership. This makes it desirable to concentrate at first upon projects concerned with the preparation of teachers and administrators.

INITIAL PROJECTS

The nature of the program makes it necessary to start with a few centers and to add others only as sufficient consultation service and support can be provided. The first project was launched in the Burton School in Grand Rapids where the faculty undertook to develop a schedule of records to meet the requirements when attention is focused upon the child rather than upon subject-matter. The second beginning was at Central State Teachers College, Mt. Pleasant, where an appraisal and reorganization of the program of undergraduate teacher-training is being attempted. Another project in the preparation of teachers is underway in the Detroit area under the joint sponsorship of Wayne University, the other departments of the Detroit public schools, and the Merrill-Palmer School. A fourth project at the University of Michigan will be concerned particularly with the research aspects of the state-wide program. As rapidly as possible other demonstrational projects will be sponsored. Many fields have been recommended for attention. The following are mentioned only as illustrations of areas which might be included: the training of school administrators and supervisors, elementary and secondary education, rural education, the development of individualized curriculums for atypical groups. (Those not happily adjusted to the present program of instruction due to superior ability, inferior ability, or other causes. The socially and emotionally maladjusted, etc.)

In addition to the demonstration projects consideration is being given to the values that might come from a comprehensive survey of such innovating practices in education in Michigan as have special reference to the character outcomes of education. It is also recognized that major attention must be given to various research studies which will be necessary to the above mentioned projects.

TRENDS IN ELEMENTARY AND SECONDARY EDUCATION

To further clarify the trends which seem to it as most significant to educational progress, the planning board has prepared for its own use a tentative statement of principles which seem essential to a desirable program of elementary and secondary education. With full realization of the inadequacy of such a brief statement, these principles are stated below.

1. Schools should attempt to provide experiences for two general objectives:
    - *a.* Personal development
    - *b.* Social development (including adjustment to family, vocation, and community).
2. A school program which attempts to realize the above general objectives should take cognizance of what is now known concerning:
    - *a.* The mental and physical hygiene of the child
    - *b.* The relation of learning to maturity
    - *c.* The importance of individual differences
    - *d.* The laws of learning (including motivation)
    - *e.* The development of individual and social responsibility through active participation and experience in self-direction.
3. The school which is interested in realizing the general objectives and which is to take into account the current state of knowledge from fields of physiology, psychology, and sociology will incline to the left on each of the following contrasts:

a. Optimum development for age	vs.	Maximum development for age
b. Individual standards of progress	vs.	Group standards of progress
c. Interaction	vs.	Coaction
d. Cooperation	vs.	Competition
e. Intrinsic motivation	vs.	Extrinsic motivation
f. Child responsibility	vs.	Dependence on adult
g. Positive and directive controls	vs.	Negative controls
h. Active child	vs.	Passive child
i. Security in a group	vs.	Isolation of the individual
j. Creativity	vs.	Formality
k. Child research	vs.	Adult presentation
l. Subject as means	vs.	Subjects as ends
m. Integrated performance	vs.	Narrow skills

4. The curriculum and processes of education should be studied in relation to the two general objectives stated above. Education must be functional in terms of personal and social development. Abstract learning as such and as an end in itself should occupy a minor place in nursery, elementary, and secondary education.

The curriculum should be flexible and constantly changing and should arise out of the present needs and interests of children more largely than their anticipated needs. The emphasis in the program would be on the children creating the curriculum. The teacher in this process must have at her hand the necessary kinds of data and materials from the various fields of knowledge. Such material may rest on a basis of an analysis of the activities of children and of adults. It is not the teacher's function, however, to present this material in any formal fashion.

In training for educational and vocational skills the activity analysis will be found particularly helpful as a basis for the development of the program of instruction, and the curriculum will be influenced by anticipated needs to somewhat larger extent than in other phases of instruction.

5. A school which is planned in terms of the objectives of education as personal and social development and which accepts the synthesis of technical information as outlined above will gradually make changes in the following directions:

   a. Will develop the school as a social experience.
   b. Will extend the experiences of the children beyond the range of the school walls.
   c. Will secure teachers chosen for personality and capacity as well as for a given pattern of training and experience.

d. Will select supervisors for personality, capacity and experience, and develop them as students of the processes of social leadership and human relations, and as counselors with staff members in the formation of policies.

e. Will expand facilities for health protection and education and for guidance on personality development.

f. Will abandon the selective function and have less regard for the preparatory function as commonly conceived.

g. Will replace outworn administrative practices with respect to classification for instructional purposes.

h. Will abandon the traditional marking system.

i. Will abolish administrative failure (non-promotion, etc.).

j. Will have more and better books and materials.

k. Will offer an educational setting with sufficient flexibility and richness to insure to every child an opportunity for that development of which he is capable.

l. Will change the rôle of the teacher from that of dominating director and instructor to that of participant and counselor in an interacting group.

6. There is little direct evidence of a strictly research type that justifies any particular pattern of organization of a school for instructional purposes.

Existing plans of organization and instruction in schools represent deductions from philosophical considerations which have synthesized the state of knowledge at the time at which the innovation was made. Once the structure has been completed, there is a tendency to resist further change, even though there is little direct experimental evidence which may support it as compared to some other pattern which is in operation or proposed for consideration. It is the point of view of the committee that schools should develop a method of work by which research evidence and modern social thinking is constantly reflected in their basic planning.

7. Each school should have, in addition to the usual child accounting information, an individual cumulative file for each child with data on family and personal history, periodic physical examinations, psychological examinations, achievement tests, personality tests, and rating scales. The record should include a cumulative journal of incidents concerning desirable

and undesirable behavior, sufficiently complete to give a continuous picture of the personality-pattern of the child. The record should give a register of parent interviews, important decisions and treatment contacts.

8. In order that there may be sound and continuous progress toward a more adequate curriculum, the program of elementary and secondary education should include a plan "for the continuous appraisal and readjustment of the educational program to fit changing conditions."

THE PREPARATION OF TEACHERS

New points of emphasis in elementary and secondary education suggest the need for modifications in the pattern for the preparation of teachers. Many suggestions have been made which predict the nature of these changes and in certain institutions various innovations already have been attempted. The following statements suggest some of the general principles which seem to merit consideration in further experimentation:

1. It is generally recognized that the teacher should be qualified in the various professional skills, knowledges, and attitudes necessary to successful teaching. He must also be prepared to function as a responsible and contributing member of the community, and as an effective participant in the relationships of the home or family group. In addition to his preparation for the relationships of vocation, community, and home, the teacher should be prepared for a complete life as an individual, with attention given to the worthy use of leisure, to the enrichment of appreciations and interests, to emotional adjustment, and other essential factors. The curriculum should be validated upon the basis of needs in each of these areas.

2. The curriculum should be organized on a functional basis. The accumulated racial experience should be presented, not as abstract subject matter, but in relation to the functional needs of the teacher in vocational, community, and home relationships; and in relation to the teacher's efforts to develop a well-integrated and complete personal life.

3. Since prospective teachers differ in their personal and professional goals, in their abilities, and in their needs, there must be an increased individualization of program. Such an adaptation to individual differences will require:
    a. Such changes in the administrative plan of each institution as will make possible, from the time the

prospective teacher first enters upon his training, relationships to faculty-counselors which will result in constant exchange of ideas, and experiences, and cooperative planning of the student's activities.

b. Records covering the pre-college years of the student.

c. A systematic study of the ability, achievements, and other personality factors of each student made at the time of entrance, and a continuous record of development during the period of training.

d. Flexibility of the instructional program.

4. The prospective teacher should grow in sensitivity to needs and problems, and gain skill in the initiation, direction, and appraisal of both individual and group endeavors. This suggests need for the following:

   a. Opportunity for counseled self-direction in planning his own educational program.

   b. Experiences which will lead him to discover for himself the significant problems involved in the vocational, community, home, and personal life of a teacher.

   c. In addition to the usual directed teaching, opportunities to participate in curriculum planning and to initiate new educational activities.

   d. Group and individual appraisals of progress and achievement.

5. One of the basic needs is for functional knowledge of the child as an individual and as a member of social groups. An opportunity should be provided for the prospective teacher:

   a. To become familiar with the methods and techniques for child-study.

   b. To have opportunity to observe children and to interpret the observations in relation to the findings of research and the writings of the child-study specialists.

   c. To have practice in the use of accumulated racial experience (the findings of the sciences and the arts) as it will assist the teacher to contribute to the satisfying of pupil needs.

6. A program of laboratory experience should begin early and continue throughout the training program. This would give opportunity for a study of the pupil; for contact with

problems of teaching, group organization, and pupil-teacher relationships; and an opportunity for the prospective teacher to try out his ability under supervision before assuming complete responsibility for work as a teacher. The laboratory and practice experience will bring to the attention of the student certain problems which will be the stimulus for individual and group conferences, for directed study of source materials, and other activities related to the learning process.

7. Certification should give recognition not only to the formal qualifications of the candidate but,
   a. To the fact that he is able to function in the various relationships of the profession.
   b. To his ability to participate as a citizen in the community and as a worthy member of the home group.
   c. To the maturity and integration of his personality.

   Such a basis for certification will make necessary a cumulative record of the functioning of the prospective teacher in various relationships during the period of training.
8. The training program presupposes careful planning with regard to basic administrative matters, such as the supply and demand for teachers, problems of placement, tenure, salary schedules, and other related problems.
9. The program for the preparation of teachers must be continuously adjusted to changing conditions and to a growing understanding of educational processes.

CONCLUSION

The foregoing paragraphs present a plan for demonstration and experimentation by which it is hoped that educational progress can be encouraged throughout the State of Michican. The statement of principles is to be considered only as a temporary guide for those responsible for the projects and will undergo revision and amplification as demonstration and research may point the way. It is hoped that through the cooperation of faculty members in the local centers where projects are located, with educational consultants brought in to assist, there will come a growing understanding of the desirable goals and effective processes of education.

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WILLARD C. OLSON,
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Intelligence and the Vocational Choices of College Students

MUCH has been said but little known as to the relation of intelligence to vocational choices. This note will present certain points of objective evidence arising out of a study of highly selected contrasting groups of 10,000 junior college students taking the American Council on Education *Psychological Examination*, 1928 edition. This large group of students was the one reported upon by Dr. Walter C. Eells in this journal in 1930.[1]

In order to ascertain possible relationships between intelligence and the wisdom of college students' educational and vocational choices, two sub-groups, representing the extremes in *Psychological Examination* scores of this group of 10,000, were selected for further study. In 1931 data were secured from one group of 195 men students who were in the upper five per cent of the distribution of scores. The average score of this group on the *Psychological Examination* was 250.6, equivalent to the 97 percentile of the national norms for that year's form of the test. An "estimate" would give this group an average I.Q. of about 140.[2] The second group consisted of 157 men students who were in the lower 15 per cent of the distribution. They had an average score of 62.9, placing them at the 8.0 percentile of the national norms. Their average I.Q. probably lies between 90 and 100.

The vocational choices of these two groups of junior college men, expressed in 1929 when three-fourths of them were freshmen, did not reflect these wide differences in intelligence test scores. Fifty-one per cent of the low-score group chose the professions as compared with 68 per cent of the high-score group. While this is a fairly large difference of 17.0 ± 3.5 per cent (5 times the probable error of the difference), it is much smaller than the 143.0 ± 8.4 intelligence test score points separating the two groups (18 times the probable error of the difference).

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[1] W. C. Eells, "California Junior College Mental-Educational Survey." *Educational Record,* 1930, 11, 281-291.

[2] This estimate was made as carefully as our present knowledge permits. Chief reliance was placed upon the previously computed intelligence quotients of 39 of Terman's gifted children study who later entered Stanford University and upon a regression equation derived from 440 Stanford College Aptitude Test scores upon *Psychological Examination* scores ($Y = 23X + 31.50$).

The fact that slightly over one-half of the students representing the lowest 15 per cent in college intelligence test scores chose the professions is somewhat startling. Exactly the same percentage, 51.5 per cent, chose the professions in 1931, in the face of the fact that no single one of this group had made a "B" average during his junior college work (as compared with 44 per cent of the high-score group with "B" averages) and that 49 per cent of them had withdrawn from or had failed in junior college at the time this statement of vocational choice was made![1]

Intelligence is seemingly related to permanence of vocational choice. Statements of vocational choice separated by two years (made in 1929 and in 1931, a period ranging from 20 to 26 months) resulted in 62 per cent of the high-score group naming the same or functionally similar vocations both times, as compared with 42 per cent of the low-score group. This is a difference of 20.0 ± 3.5 per cent. About the same proportion of each group had made a decision of some sort, intelligence evidently not contributing greatly to the *fact* of a decision (18 per cent of the high-score students, 22 per cent of the low-score).

Degree of intelligence is possibly also related to the school period when the decision was made. Twenty-two per cent of the high-score group stated they had decided on their vocation while in elementary school as compared with 11 per cent of the low-score group, a difference of 11.0 ± 2.9 per cent. These data, of course, involve the rather unreliable factor of memory. Regardless of whether or not this is a highly significant difference, the theory that the less intelligent decide on a vocation early in life as a result of a "fixation" is not substantiated. Abundant proof exists in other phases of this study (reported elsewhere) that many psychological compensations operate in the vocational decisions of the students low in academic intelligence, but these compensations seem to arise out of the students' high school and college experience. They are apparently the result of the stigma resulting from poor grades and the emphasis placed upon scholarship by society as a whole, rather than upon the childhood glamor surrounding certain vocations.

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[1] As nearly as could be determined, considerably less than 10 per cent of the "withdrawn" students enrolled in another collegiate institution.

Both groups of students were also scored on Strong's Vocational Interest Blank. Forty-five per cent of the highly intelligent group secured A ratings in the vocation they had chosen for a life work (indicating harmony of interest-pattern with the vocation chosen) as compared with only 22 per cent of the low intelligence group. Only three per cent of the high-score group secured C or negative ratings on the vocation chosen, but 20 per cent of the low-score group secured C ratings on the vocation chosen.

These data all point to the greater consistency, permanence, and suitability of the vocational choices of students high in academic intelligence as measured by the *Psychological Examination* than of students low in such intelligence. The counselor should examine the vocational choice of a given student in the light of his general intelligence test score. This does not mean that the choices of students high in intelligence should be accepted without question, but conversely, that the choice of students low in intelligence *must* be examined with the greatest of care. One of the curses of American "democracy" is the varying stamp of social approval placed upon specific vocations. Many college students of low academic intelligence are almost entirely incapable of properly evaluating the superficiality of such vocational "prestige;" at least, in the light of this study, they appear to be less capable than students high in such intelligence.

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Servant or Master?[1]

TO SERVE or to be served seems to this writer the leading question in all the discussion regarding the present cycle of that time-worn topic, the machine age. What we shall say here has for its excuse the debate which began when the booklet entitled "You and Machines," prepared under the auspices of the American Council on Education by Dr. William F. Ogburn, was declined by those in charge of the Civilian Conservation Corps for whom it was intended. The purpose of the book was to aid in education and training of the young men in the C.C.C. Camps by offering live topics for discussion, and was doubtless written with the intent of promoting that discussion among the boys into whose hands it might fall. But to many who have examined the brochure, it has seemed both in text and in illustrations to present not the most that can be said on either side of the question, but rather to present a pessimistic view which is summed up in the sentences found in the last paragraph: "It is youth to whom we must look, not old men. They must learn to adjust themselves to the machine," and "The problem of the modern age is to adjust itself to a new monster, the machine. Its habitat is not the forest but the modern city." Then the last sentence reads: "The future is in the hands of youth," and the tailpiece is one of the few hopeful cartoons by F. G. Cooper, showing the robot, which until now has had the best of things, ridden by a youth, whip in hand.

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[1] In the discussion which followed the action of Mr. Robert Fechner Director of the Civilian Conservation Corps, in not permitting the use of the pamphlet entitled "You and Machines" in the Camps, the American Council on Education received a large number of letters condemning the action of Mr. Fechner. On the other hand, there were a few representatives of technical education who upheld the action of Mr. Fechner. The Director of the Council, anxious to have both sides of the question presented, asked Mr. Harrison E. Howe, Editor of "Industrial and Engineering Chemistry," to prepare this article, which discusses the pamphlet from the point of view of those interested in technical education.

And so it seems to us that the question is whether we shall serve or be served by the machine. But perhaps it would be well to decide whether we want the machine at all. Is it worth keeping, improving, and using in ever greater measure, or do we prefer to abolish it and what it does and go back to those early days where the possessions of the pioneer and his family were limited to what he could produce or what he could obtain by barter from other families which because of special skill or materials could make something he could not. For those who prefer whatever happiness comes with that plane of living, doubtless there can be found somewhere on the surface of the earth the particular stage of civilization which meets their ideals. There are still tribes living as have their ancestors from time immemorial, and there are all gradations from that to the demand for a multiplicity of conveniences and things with which to do, or in other words, modern civilization. Those who yearn for the days of old, when life was really simple as viewed from our day, but without doubt regarded as complex by people of that time in comparison with what their ancestors had, hesitate to go the whole way. They are willing to forego much that the average man now regards as necessary, but there is always some special comfort, some convenience, some advantage of modern times, to which they wish to cling. It is accepted that the wealth of the world is the sum of services and products, and it must be admitted that the newer methods, involving the machine, have brought us more and cheaper products, so that the individual has had an opportunity to obtain for himself a share which in the aggregate is worth more than anything available on a like basis before the development of our modern technic. In other words, as George P. Torrence has pointed out, today as an organized industrial society we produce an abundance of things which the pioneer lacked. This production is possible because men assemble themselves in factories, use machinery, and make many times the quantity that could be produced by individuals working alone. In times of stress such as those through which we have been passing, we forget that abundant life is possible only by the use of production machinery in industrial enterprises.

If it were necessary, one could present statistics on employment made possible by machines that are quite as impressive as any of the intriguing stories about the amount of work done by a single unit replacing ever so many manual laborers. No one knows exactly whether technology has led to the employment of more hands than it has displaced, but we do know that the great employers of labor today are those in enterprises which are founded on science. Many reports have called for the collection of acceptable data on the much discussed problem, but until that has been assembled and interpreted we can only rely upon the United States census, where it is shown that in 1880 about 34 per cent of the population of the United States was gainfully employed, whereas, in 1930, 40 per cent was so engaged. When one considers the growth in the population and that 1930 had already seen the depression one year under way, these statistics are impressive.

No one questions the seriousness of the adjustment period experienced by those displaced in industry by machines. But is it not true that here as in many other cases the benefits for the many are more important in the long run than injury to the few? And should we not rather address our efforts to minimizing or eliminating difficulties incident to such an adjustment period, rather than condemn the use of the machine which may have caused it? This responsibility has been assumed by some forward-looking concerns. Where the introduction of a machine will displace labor it is delayed until the men affected can be placed elsewhere, either in that organization or in some other convenient plant. There have been some plans adopted which involve payments to workers whose jobs have been lost because of the machine for a period during which they can adjust themselves, and a number of suggestions along this line were made in the report of the Prosser Committee on Technological Employment to the Secretary of Labor under date of November 14, 1931, and included in the report of the hearings on unemployment insurance before the committee of the Senate and printed as Report No. 964 in 1932.

As in most questions of this kind, there appears to have been a lot of confused thinking. The fact that mass production has made production for the masses is overlooked. If automobiles had to be made by hand, it is obvious that the man who made them would most likely be unable to ride to his work in such a vehicle, nor would it be possible, as is now often the case, for the washwoman to drive up to the door on Monday morning. We should be in the same position with respect to our highways, if in their construction we were denied the services of the machine. This was emphasized not long ago, when one of the states in appropriating money for roads discussed requiring all work to be done with pick and shovel. The absurdity of the suggestion was emphasized when it was pointed out that even more jobs would thus be created if a further requirement reduced the shovel to the size of a teaspoon. And so it is not the machine which is to blame, but rather the way in which it has been used and perhaps in the way its fruits have been distributed.

In criticizing the machine, however, a differentiation should be made between those machines which give rise to the question of technological unemployment and others which are of unquestioned benefit to us all. It would be difficult to decide in advance into which class a proposed machine might fall, for no one is wise enough to foresee how a device will be used in the future and perhaps two-thirds of all the jobs today would be wiped out if we decided to do away with those industries which are themselves machine-made. If today we should declare a moratorium on invention and should set our faces against the development of still more efficient machinery, we might easily deny benefits to our successors a generation or two in the future, even more valuable than those we now enjoy as the result of the last industrial revolution and the machine developments of the past fifty years. We are repeatedly faced with the choice of no machine and a high priced product available to the few, and machine production with a low priced output quite generally available.

To our way of thinking there can be no question but that the machine is here to stay and that the machine offers a great opportunity to youth. No matter how skillful machines are they are far from perfect. The labor they displace is usually unskilled labor and by eliminating drudgery they contribute directly to labor's welfare. But they call for care, attention, adjustment, development, improvement, all at the hands of better educated labor of high skill, thus placing a premium upon education, training, and experience, and giving an opportunity to earn a higher wage. The experience of plants with many automatic devices is that a corps of intelligent specialists is required to keep these devices in order, while in some plants the fact that disagreeable hard work is still required for some operations is regarded by labor itself as an opportunity for further invention and the need for a new machine.

After all, this is not so much a machine age as we are led to believe. It is rather an age of materials, and the machine itself is often found in a state of arrested development, awaiting the perfection of some alloy, synthetic resin, chemical fiber, or other material which will enable the machine to perform its service and withstand the conditions under which it must operate. In the perfection of new materials designed for peculiar service, there lie many apportunities for youth.

A new discovery can cause obsolescence overnight, be the beginning of a whole new industry, the development of which lies in a new direction and call for fresh inventive ability. The evolution which is going on today in transportation offers an example. Light strong metals have been developed. This has led to new designs for transportation vehicles, particularly on our railroads. These make possible higher speeds, which in turn may soon bring us to the necessity of eliminating grade crossings and are certain to call for many adjustments, demanding inventive genius, and open opportunities to trained youth. We may not have in the immediate future a series of such important job-producing developments as has taken place since the beginning of the twentieth century, but one writing on the subject in the 90's would doubtless have made the same prediction. No one is wise enough to foretell in what way and how far the pendulum will swing, but if history is at all reliable as a guide, we can depend upon a succession of new demands with their opportunities.

No, our material salvation does not lie in surrendering to the machine, nor in its destruction. Rather it lies in the direction of more machines, controlled, and particularly in progress in the control of the manner the products of the machine are utilized, and its benefits shared in a way which will redound partly to the benefit of labor affected rather than almost wholly to capital which the machine represents. The opportunity for youth is in acquiring basic knowledge and skill, that he may master the machine, make a better one, devise the materials out of which to fashion an automatic device to perform a task still requiring hard labor and take additional burdens from the backs of men, that they may have the time and the wherewithal for the abundant life, self-improvement, and at least a minimum of culture, to which all would seem to have a right.

In 1928 we were not worrying about the machine age or technological unemployment. There is somewhat less concern about these subjects in 1935 than in 1933. Let us hope that the subject may soon be laid aside as finished until the cycle returns again, and, if it must return, may it be at a very distant date.

HARRISON E. HOWE,
Washington, D. C.

The 1934 Psychological Examination

THE first edition of the American Council on Education Psychological Examination was published in 1924. The current edition is therefore the eleventh. The number of institutions using the 1934 edition is 423, and the number of tests used is 150,226. These figures are of January 15th.

This report contains norms for the 1934 edition. Tabulations have been made of the records of 52,435 students in 240 colleges.* These numbers include all reports received by March 12th.

The list of colleges sending in records is given below. The table also shows the number of records reported from each college, and the first quartile, median, and third quartile of the gross scores from each college.

Later tables show norms for the five separate tests and for the gross scores, equivalent scores for the last four editions, and means and standard deviations for the last eight editions.

UNIVERSITIES AND COLLEGES SUBMITTING TEST RECORDS

	Number of Students	*Gross Scores*		
		Q_1	*Median*	Q_3
Alabama College, Montevallo, Ala...	303	106.56	138.16	174.85
Alabama Polytechnic Institute, Auburn, Ala....	528	100.24	132.93	173.13
Alabama State Teachers College, Troy, Ala....	264	82.06	107.69	142.63
Alaska College, College, Alaska.....	35		163.75	
Alberta, University of, Edmonton, Canada....	400	186.79	220.00	251.47
Albion College, Albion, Mich........	188	140.00	178.13	227.50
Alfred University, Alfred, N. Y......	163	158.44	190.36	224.46
Allegheny College, Meadville, Pa....	73	153.21	180.71	221.87
Antioch College, Yellow Springs, Ohio....	218	195.31	224.55	249.82
Arizona State Teachers College, Tempe, Ariz....	332	109.67	140.34	172.11
Arkansas State A and M College, Magnolia, Ark....	218	80.33	112.50	149.55
Arkansas State College, Jonesboro, Ark....	176	123.33	137.86	171.25

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* Seven colleges requested that their scores be not published.

	Number of Students	Gross Scores		
		Q_1	Median	Q_3
Aurora College, Aurora, Ill.	54	106.25	150.00	176.43
Bakersfield Junior College, Bakersfield, Calif.	283	123.44	163.18	197.79
Baker University, Baldwin City, Kansas	118	122.08	160.00	210.83
Ball State Teachers College, Muncie, Ind.	331	116.94	152.41	189.50
Baltimore College of Commerce, Baltimore, Md.	21		155.00	
Bay City Junior College, Bay City, Mich.	192	133.33	176.87	210.00
Bethany College, Bethany, W. Va.	141	140.50	177.92	221.35
Birmingham-Southern College, Birmingham, Ala.	232	131.00	167.06	204.67
Bishop's University, Lennoxville, Quebec	48		200.00	
Blackburn College, Carlinville, Ill.	178	152.69	182.00	222.50
Bowdoin College, Brunswick, Me.	154	191.36	222.50	252.89
Bradley Polytechnic Institute, Peoria, Ill.	231	140.63	176.05	214.04
Briar Cliff Junior College, Sioux City, Iowa	54	150.83	172.50	195.00
Brooklyn College, Brooklyn, N. Y.	369	192.27	216.37	244.65
Bucknell University, Lewisburg, Pa.	143	135.50	174.23	210.31
California State Teachers College, Chico, Calif.	211	131.62	161.94	196.83
California State Teachers College, Fresno, Calif.	547	135.22	168.81	201.49
California State Teachers College, San Diego, Calif.	166	134.50	165.55	200.63
California State Teachers College, Santa Barbara, Calif.	299	128.29	161.25	199.30
Carleton College, Northfield, Minn.	204	160.83	204.17	242.14
Carroll College, Helena, Mont.	29		145.00	
Carroll College, Waukesha, Wis.	158	147.50	175.00	213.44
Case School of Applied Science, Cleveland, Ohio	162	189.61	221.43	255.50
Catholic University of America, Washington, D. C.	100	127.50	163.33	200.00
Cedar Crest College, Allentown, Pa.	65	128.50	173.00	214.58
Centenary College, Shreveport, La.	178	107.22	145.45	187.22
Central College, Fayette, Mo.	178	129.17	158.24	198.33
Central State Teachers College, Mount Pleasant, Mich.	208	108.18	152.10	190.00
Central Y. M. C. A. College, Chicago, Ill.	678	129.86	166.67	206.45

	Number of Students	*Gross Scores*		
		Q_1	*Median*	Q_3
Chattanooga, University of, Chattanooga, Tenn.	157	127.50	176.25	214.79
Chicago, University of, Chicago, Ill.	628	193.17	232.83	264.56
Clark University, Worcester, Mass.	92	186.00	218.89	255.00
Coe College, Cedar Rapids, Iowa	204	136.00	169.17	208.00
Colby College, Waterville, Me.	182	163.75	201.25	232.08
Colgate University, Hamilton, N. Y.	295	159.40	188.20	229.58
Colorado College, Colorado Springs, Colo.	163	138.21	176.07	210.28
Colorado State Teachers College, Greeley, Colo.	445	122.31	155.97	197.25
Colorado, University of, Boulder, Colo.	852	146.22	181.36	216.59
Connecticut College for Women, New London, Conn.	214	147.75	167.92	189.69
Cottey Junior College, Nevada, Mo.	46	145.00	186.00	206.43
Creston Junior College, Creston, Iowa	77	135.62	179.17	211.07
Dartmouth College, Hanover, N. H.	699	179.36	211.52	244.60
Delaware, University of, Newark, Del.	199	143.65	179.06	214.83
Denver, University of, Denver, Colo.	442	152.14	191.76	229.79
DePauw University, Greencastle, Ind.	394	169.75	203.44	241.96
Drew University, Brothers College, Madison, N. J.	37	200.83	235.00	257.50
D'Youville College, Buffalo, N. Y.	80	115.71	145.71	170.00
Earlham College, Richmond, Ind.	125	131.14	174.38	213.50
Eastern Illinois State Teachers College, Charleston, Ill.	363	114.90	145.48	184.58
Eastern Kentucky Teachers College, Richmond, Ky.	406	84.46	113.71	149.75
Elizabethtown College, Elizabethtown, Pa.	55	139.17	181.00	212.50
Elmhurst College, Elmhurst, Ill.	89	150.36	182.14	223.75
Emmanuel Missionary College, Berrien Springs, Mich.	181	141.14	179.70	223.41
Emory Junior College, Valdosta, Ga.	47	111.88	161.25	207.50
Emory University, Atlanta, Ga.	176	147.14	179.38	211.67
Eureka College, Eureka, Ill.	111	120.94	165.00	207.50
Evansville College, Evansville, Ind.	169	122.08	163.67	201.07
Fenn College, Cleveland, Ohio	125	192.81	226.05	266.78
Florida State College for Women, Tallahassee, Fla.	572	131.03	166.33	206.94
Florida, University of; Gainesville, Fla.	865	129.26	170.25	211.49
Franklin College of Indiana, Franklin, Ind.	84	126.67	165.00	201.67

	Number of Students	Gross Scores		
		$\mathfrak{Q}_1$	Median	$\mathfrak{Q}_3$
Gallaudet College, Washington, D.C.	28		160.00	
Geneva College, Beaver Falls, Pa.	136	155.00	189.17	231.82
George Williams College, Chicago, Ill.	75	145.94	179.17	211.25
Georgian Court College, Lakewood, N. J.	36		168.33	
Georgia State Women's College, Valdosta, Ga.	125	91.39	122.69	167.50
Gettysburg College, Gettysburg, Pa.	155	121.46	152.50	190.36
Glendale Sanitarium and Hospital, Glendale, Calif.	20		170.00	
Goshen College, Goshen, Ind.	93	100.36	138.33	172.92
Graceland College, Lamoni, Iowa	107	111.88	159.44	197.08
Great Falls, College of; Great Falls, Mont.	39		195.00	
Grinnell College, Grinnell, Iowa	281	157.92	195.00	232.93
Hanover College, Hanover, Ind.	131	141.50	178.33	223.54
Haverford College, Haverford, Pa.	100	241.25	273.85	298.57
Hobart College, Geneva, N. Y.	110	153.75	194.62	230.56
Hood College, Frederick, Md.	129	111.04	140.62	163.59
Hutchinson Junior College, Hutchinson, Kans.	242	119.50	163.85	202.50
Idaho, College of; Caldwell, Idaho	106	126.88	167.78	211.67
Idaho State Normal School, Lewiston, Idaho	207	108.86	139.28	167.88
Idaho, University of; Moscow, Idaho	503	117.80	152.98	189.05
Illinois College, Jacksonville, Ill.	159	137.04	174.23	207.50
Immaculata College, Immaculata, Pa.	82	137.00	177.50	221.00
Iowa Wesleyan College, Mt. Pleasant, Iowa	98	112.50	138.75	183.57
James Milliken University, Decatur, Ill.	151	119.75	155.62	198.93
Judson College, Marion, Ala.	68	140.00	167.14	194.00
Junior College of Connecticut, Bridgeport, Conn.	67	158.21	190.42	218.12
Kalamazoo College, Kalamazoo, Mich.	89	155.31	188.12	226.88
Kansas, University of; School of Education, Lawrence, Kans.	795	128.12	161.84	203.52
Kenyon College, Gambier, Ohio	95	156.25	194.38	220.36
Keuka College, Keuka Park, N. Y.	60	180.00	220.00	251.67
Lake Erie College, Painesville, Ohio	32		180.00	
Larson School and Junior College, New Haven, Conn.	97	116.50	149.28	204.38
La Salle College, Philadelphia, Pa.	112	137.50	163.08	189.23
Lawrence College, Appleton, Wis.	261	157.36	194.69	229.30
Lehigh University, Bethlehem, Pa.	407	179.46	216.09	250.10

	Number of Students	Gross Scores		
		Q_1	Median	Q_3
Louisiana State University, Baton Rouge, La.	865	108.21	147.98	188.70
Louisville, University of; Louisville, Ky.	304	131.67	163.23	195.88
Lynchburg College, Lynchburg, Va.	84	97.14	137.50	191.67
Lyons Township Junior College, La Grange, Ill.	124	147.14	182.5	230
MacMurray College for Women, Jacksonville, Ill.	136	141.67	180	212.50
Maine, University of; College of Agriculture, Orono, Me.	128	125	162.73	196
College of Arts and Sciences, Orono, Me.	149	152.32	180.45	215.23
College of Technology, Orono, Me.	143	154.32	191.25	223.25
Marquette University, Milwaukee, Wis.	483	149.34	178.93	211.75
Maryland State Normal School, Frostburg, Md.	39		133	
Maryland State Normal School, Towson, Md.	132	148.33	184.54	217.50
Maryland, University of; College Park, Md.	483	140.72	176.28	209.61
Maryville College, Maryville, Tenn.	317	131.62	170.65	215.53
Marywood College, Scranton, Pa.	105	122.08	156.88	193.50
Massachusetts State College, Amherst, Mass.	310	182.95	213.81	243.61
McPherson College, McPherson, Kansas	121	110.36	144.09	186.88
Michigan, University of; Ann Arbor, Mich.	1352	179.74	212.93	245
Middlebury College, Middlebury, Vt.	190	195.91	229.41	259.06
Millsaps College, Jackson, Miss.	142	106.25	151.25	187.50
Minnesota State Teachers College, Mankato, Minn.	192	130	163.08	197.78
Minnesota State Teachers College, Winona, Minn.	145	139.38	166.43	201.07
Misericordia College, Dallas, Pa.	46	127	150	201.67
Mississippi Delta State Teachers College, Cleveland, Miss.	78	85	123.33	169
Missouri Valley College, Marshall, Mo.	71	106.25	162.14	197.50
Monmouth College, Monmouth, Ill.	172	126.15	160.77	196.25
Montana, State University of; Missoula, Mont.	594	135	167.02	202.50
Moravian College for Women, Bethleham, Pa.	67	161.50	206.43	234.64

	Number of Students	*Gross Scores*		
		Q_1	*Median*	Q_3
Morton, J. Sterling, Jr. College, Cicero, Ill.	305	123.15	159.77	197.88
Mount Mercy College, Pittsburgh, Pa.	54	160.55	180	232.50
Mt. St. Joseph College, Philadelphia, Pa.	65	154.16	189.44	229.50
Mount Saint Joseph College, West Hartford, Conn.	68	133.33	164.00	200.00
Mount Saint Vincent, College of; New York, N. Y.	102	172.50	201.43	239.37
Nazareth College, Rochester, N. Y.	71	172.50	201.25	236.50
New Hampshire, University of; Durham, N. H.	406	144.79	179.68	216.71
New Jersey State Normal School, Jersey City, N. J.	91	172.19	200.55	225.32
New Mexico, University of; Albuquerque, N. Mex.	313	100.54	160.50	195.66
New Rochelle College, New Rochelle, N. Y.	190	160.94	191.11	220.63
New York Y. M. C. A. Schools, New York, N. Y.	29		138.33	
North Central College, Naperville, Ill.	162	141.50	177.50	210.42
North Dakota State Teachers College, Valley City, N. D.	157	116.35	147.81	186.14
Northland College, Ashland, Wis.	59	109.58	143.00	175.43
Northwest Nazarene College, Nampa, Idaho	141	112.25	148.50	181.50
Notre Dame College, South Euclid, Ohio	46	177.50	203.33	237.50
Oak Park Junior College, Oak Park, Ill.	60	151.66	186.00	214.00
Oberlin College, Oberlin, Ohio	374	190.06	222.26	257.06
Oklahoma A and M College, Stillwater, Okla.	1147	100.08	132.05	168.64
Oregon Normal School, Monmouth, Ore.	193	121.39	160.71	201.72
Oregon State College, Corvallis, Ore.	873	137.42	172.12	209.54
Pacific University, Forest Grove, Ore.	117	134.38	170.71	219.58
Park College, Parkville, Mo.	215	156.82	184.23	221.61
Parsons College, Fairfield, Iowa	129	152.32	182.50	205.36
Pennsylvania College for Women, Pittsburgh, Pa.	72	185.56	208.89	242.50
Pennsylvania State Teachers College, East Stroudsburg, Pa.	51	71.07	97.00	125.63
Pennsylvania State Teachers College, West Chester, Pa.	318	115.43	159.38	196.54

	Number of Students	*Gross Scores*		
		Q_1	*Median*	Q_3
Phillips University, Enid, Okla.	166	127	164.28	195.42
Port Huron College, Port Huron, Mich.	81	145.42	185.50	212.50
Randolph Macon Woman's College, Lynchburg, Va.	187	164.31	198.48	230.19
Reed College, Portland, Ore.	109	186.50	225.00	258.93
Rhode Island State College, Kingston, R. I.	337	125.76	169.17	209.86
Rochester, University of; Rochester, N. Y.	300	198.50	228.88	256.78
Rollins College, Winter Park, Fla.	94	165.00	196.36	234.09
Rosary College, River Forest, Ill.	116	160.91	196.00	230.00
Rose Polytechnic Institute, Terre Haute, Ind.	50	165.00	190.00	228.75
Rosemont College, Rosemont, Pa.	59	175.50	211.00	242.00
Russel Sage College, Troy, N. Y.	125	155.31	187.86	227.50
Saint Elizabeth, College of; Convent Station, N. J.	77	170.31	210.56	244.38
St. Helen's Hall Junior College, Portland, Ore.	58	159.00	190.00	225.00
St. Mary's College, Notre Dame, Ind.	98	139.44	162.22	197.00
Saint Mary's College, Winona, Minn.	100	128.57	161.67	197.50
St. Mary of the Woods College, St. Mary of the Woods, Ind.	82	152.14	182.50	220.63
Saint Scholastica, College of; Duluth, Minn.	86	141.25	167.14	201.67
St. Thomas College, Scranton, Pa.	182	85.59	116.67	162.50
Saint Vincent College, Latrobe, Pa.	70	135.00	170.00	219.29
Saint Xavier College, Chicago, Ill.	55	161.50	185.50	218.93
Salem College, Winston-Salem, N. C.	76	115.00	154.00	177.50
Sam Houston State Teachers College, Huntsville, Texas	247	77.38	111.67	148.75
Santa Rosa Junior College, Santa Rosa, Calif.	152	133.53	157.64	186.88
Scripps College, Claremont, Calif.	54	185.00	218.75	258.75
Shorter College, Rome, Ga.	109	130.83	172.92	200.94
Simmons College, Boston, Mass.	341	176.97	211.13	238.71
Southern Methodist University, Dallas, Texas	281	139.42	173.57	207.98
South Georgia Teachers College, Collegeboro, Ga.	200	81.05	107.65	145.00
Southwestern College, Memphis, Tenn.	121	138.93	167.22	218.21
Southwestern College, Winfield, Kans.	212	126.00	160.00	198.33
Southwest Missouri State Teachers College	317	107.21	150.20	193.12

	Number of Students	*Gross Scores*		
		Q_1	*Median*	Q_3
Spring Hill College, Mobile, Ala.	68	114.00	150.00	192.00
Stout Institute, Menomonie, Wis.	99	117.95	150.56	181.79
Sweet Briar College, Sweet Briar, Va.	173	184.53	213.93	248.86
Texas A. and M. College, College Station, Texas	1414	99.73	133.04	172.62
Texas State College for Women, Denton, Texas	761	102.76	138.92	176.47
Texas Technological College, Lubbock, Texas	757	109.57	141.10	177.12
Thiel College, Greenville, Pa.	95	139.58	178.33	220.83
Trinity College, Hartford, Conn.	125	194.72	227.81	255.36
Trinity College, Washington, D. C.	91	161.25	203.75	232.50
Tufts College, Medford, Mass.	90	159.00	200.00	230.83
Tulsa, University of; Tulsa, Okla.	221	123.47	163.67	199.77
Tusculum College, Greeneville, Tenn.	102	113.18	148.00	197.50
Ursinus College, Collegeville, Pa.	163	139.79	165.00	206.25
Vanderbilt University, Nashville, Tenn.	270	142.83	183.18	218.41
Virginia Polytechnic Institute, Blacksburg, Va.	421	104.14	137.73	180.30
Washburn College, Topeka, Kans.	250	135.00	166.92	209.54
Washington College, Chestertown, Md.	103	116.75	171.67	214.64
Washington, State College of; Pullman, Wash.	1148	130.27	170.14	205.86
Washington State Normal School, Bellingham, Wash.	232	123.33	153.50	193.57
Washington and Jefferson College, Washington, Pa.	162	119.29	154.44	190.36
Washington and Lee University, Lexington, Va.	276	142.14	181.76	231.25
Wayne University, Detroit, Mich.	591	166.17	198.26	230.07
Wells College, Aurora, N. Y.	96	202.00	230.00	252.50
Westbrook Junior College, Portland, Maine	72	124.00	171.11	200.00
Western Illinois State Teachers College, Macomb, Ill.	357	116.77	147.08	184.60
Western State Teachers College, Kalamazoo, Mich.	508	137.27	170.25	207.43
Westminster College, New Wilmington, Pa.	215	137.64	175.00	215.14
West Virginia State Teachers College, Shepherdstown, W. Va.	101	101.73	119.29	161.88
West Virginia, University of; Morgantown, W. Va.	400	108.89	139.68	177.39
Wheaton College, Wheaton, Ill.	233	155.50	195.36	232.08
Willamette University, Salem, Ore.	170	142.08	180.00	212.50

	Number of Students	Gross Scores Q_1	Median	Q_3
William and Mary, College of; Norfolk Division, Norfolk, Va.	147	120.75	163.57	207.81
William Smith College, Geneva, N. Y.	51	152.50	193.00	232.50
Williamsport Dickinson Seminary, Williamsport, Pa.	79	139.50	175.00	208.12
William Woods College, Fulton, Mo.	93	120.23	147.22	174.75
Wilson College, Chambersburg, Pa.	125	194.72	228.50	256.25
Woman's College of Alabama, Montgomery, Ala.	85	111.39	137.86	181.07
Woman's Hospital, School of Nursing; Philadelphia, Pa.	54	79.17	100.00	137.86
Xavier University, Cincinnati, Ohio.	143	148.96	175.91	211.39
Yankton College, Yankton, S. D.	135	126.88	175.00	209.17
Y. M. C. A. Emergency College, St. Louis, Mo.	287	163.12	193.57	235.15
York College, York, Nebr.	65	122.50	146.88	186.25
Yuba County Jr. College, Marysville, Calif.	115	117.92	153.75	185.83

Norms for Completion Test

Based on records of 10,791 students in 57 colleges.

Score	Frequency	Percentile	Score	Frequency	Percentile
0	9	.000	42	563	.696
2	4	.001	44	551	.748
4	15	.002	46	489	.796
6	25	.004	48	414	.838
8	30	.006	50	321	.872
10	64	.011	52	291	.901
12	95	.018	54	234	.925
14	137	.029	56	178	.944
16	217	.045	58	135	.959
18	274	.068	60	113	.970
20	337	.096	62	89	.979
22	454	.133	64	67	.987
24	485	.176	66	48	.992
26	559	.225	68	19	.995
28	591	.278	70	20	.997
30	635	.335	72	10	.998
32	650	.394	74	5	.999
34	671	.455	76	5	.999
36	728	.520	78	1	.999
38	664	.584	80		
40	594	.643			

Lower Quartile	27.97
Median	36.39
Upper Quartile	45.06

Norms for Arithmetic Test

Based on records of 10,791 students in 57 colleges.

Score	*Frequency*	*Percentile*	*Score*	*Frequency*	*Percentile*
0	183	.008	44	675	.858
4	394	.035	48	455	.911
8	605	.081	52	278	.945
12	741	.144	56	204	.967
16	886	.219	60	125	.982
20	1024	.308	64	58	.991
24	1106	.406	68	40	.995
28	1135	.510	72	13	.998
32	1098	.614	76	12	.999
36	983	.710	80	4	.999
40	772	.791			

Lower Quartile...................... 19.50
Median.......................... 29.51
Upper Quartile...................... 39.75

Norms for Artificial Language Test

Based on records of 10,435 students in 57 colleges.

Score	*Frequency*	*Percentile*	*Score*	*Frequency*	*Percentile*
0–1	69	.003	46–47	346	.647
2–3	35	.008	48–49	352	.680
4–5	45	.012	50–51	302	.712
6–7	61	.017	52–53	293	.740
8–9	97	.024	54–55	270	.767
10–11	138	.036	56–57	259	.793
12–13	196	.052	58–59	250	.817
14–15	200	.071	60–61	279	.842
16–17	255	.093	62–63	212	.866
18–19	294	.119	64–65	200	.885
20–21	336	.149	66–67	176	.904
22–23	368	.183	68–69	121	.918
24–25	426	.221	70–71	141	.930
26–27	470	.264	72–73	109	.942
28–29	421	.307	74–75	100	.952
30–31	387	.345	76–77	90	.961
32–33	410	.384	78–79	81	.969
34–35	398	.422	80–81	83	.977
36–37	416	.461	82–83	55	.984
38–39	393	.500	84–85	58	.989
40–41	396	.538	86–87	37	.994
42–43	374	.575	88–99	30	.998
44–45	393	.612	90	13	.999

Lower Quartile...................... 26.38
Median.......................... 39.00
Upper Quartile...................... 53.69

Norms for Analogies Test

Based on records of 10,807 students in 57 colleges.

Score	*Frequency*	*Percentile*	*Score*	*Frequency*	*Percentile*
0	187	.009	30	572	.377
2	174	.025	32	680	.435
4	215	.043	34	717	.499
6	211	.063	36	750	.567
8	263	.085	38	784	.638
10	230	.108	40	780	.710
12	219	.128	42	741	.781
14	186	.147	44	635	.845
16	202	.165	46	544	.899
18	184	.183	48	384	.942
20	232	.202	50	195	.970
22	280	.226	52	137	.985
24	340	.255	54	64	.994
26	379	.288	56	25	.998
28	484	.328	58	13	.999

Lower Quartile...................... 24.70
Median.............................. 35.02
Upper Quartile...................... 42.10

Norms for Opposites Test

Based on records of 10,612 students in 57 colleges.

Score	*Frequency*	*Percentile*	*Score*	*Frequency*	*Percentile*
0	6	.000	42	598	.321
3	6	.001	45	615	.378
6	32	.003	48	717	.441
9	46	.006	51	708	.508
12	61	.011	54	733	.576
15	108	.019	57	720	.644
18	142	.031	60	735	.713
21	247	.049	63	642	.778
24	283	.074	66	579	.836
27	346	.104	69	495	.886
30	361	.137	72	389	.928
33	450	.175	75	312	.961
36	492	.219	78	191	.984
39	529	.268	81	69	.997

Lower Quartile...................... 39.41
Median.............................. 52.13
Upper Quartile...................... 63.11

Gross Score Norms

Based on records of 52,435 students in 240 colleges.

Score	*Frequency*	*Percentile*
0–9	10	.000
10–19	20	.000
20–29	56	.001
30–39	153	.003
40–49	245	.007
50–59	471	.014
60–69	775	.026
70–79	1101	.043
80–89	1364	.067
90–99	1778	.097
100–109	2076	.134
110–119	2382	.176
120–129	2692	.225
130–139	2898	.278
140–149	3108	.335
150–159	3308	.396
160–169	3369	.460
170–179	3367	.524
180–189	3344	.588
190–199	3096	.649
200–209	2916	.707
210–219	2766	.761
220–229	2388	.810
230–239	2080	.853
240–249	1735	.889
250–259	1465	.919
260–269	1099	.944
270–279	801	.962
280–289	580	.975
290–299	390	.985
300–309	259	.991
310–319	156	.995
320–329	110	.997
330–339	46	.998
340–349	24	.999
350–359	5	.999
360–369	2	.999

Lower Quartile	129.89
Median	171.18
Upper Quartile	212.86

Equivalent Scores for 1931, 1932, 1933, and 1934 Editions

Percentile rank	Score in 1931 Edition	Score in 1932 Edition	Score in 1933 Edition	Score in 1934 Edition	Percentile rank	Score in 1931 Edition	Score in 1932 Edition	Score in 1933 Edition	Score in 1934 Edition	Percentile rank	Score in 1931 Edition	Score in 1932 Edition	Score in 1933 Edition	Score in 1934 Edition
1	40	46	38	51	34	122	134	129	146	67	175	187	184	198
2	49	56	47	61	35	124	136	131	147	68	177	189	186	200
3	54	62	54	68	36	125	137	132	149	69	179	191	188	202
4	59	66	59	73	37	127	139	134	151	70	181	193	189	204
5	63	71	64	78	38	129	141	136	152	71	182	194	191	206
6	66	74	68	82	39	130	142	137	154	72	184	196	193	207
7	70	78	71	86	40	132	144	139	156	73	186	198	195	209
8	72	80	74	90	41	133	145	140	157	74	188	201	197	211
9	75	85	77	93	42	135	147	142	159	75	190	203	199	213
10	77	87	80	96	43	136	148	144	160	76	192	205	202	215
11	80	91	83	99	44	138	150	145	162	77	194	206	204	217
12	82	94	85	101	45	139	151	147	163	78	196	208	206	219
13	84	95	88	104	46	141	153	149	165	79	198	210	208	220
14	86	97	90	107	47	143	155	150	167	80	200	212	210	223
15	89	101	93	109	48	144	157	152	168	81	202	214	213	225
16	91	103	95	111	49	146	159	154	169	82	205	217	215	227
17	93	105	97	114	50	147	160	155	171	83	207	219	218	229
18	95	107	99	116	51	149	162	157	173	84	209	220	220	232
19	97	110	101	118	52	151	164	158	174	85	212	223	223	234
20	99	112	103	120	53	152	165	160	176	86	215	226	226	237
21	101	114	105	122	54	154	166	162	177	87	217	228	229	239
22	102	115	107	124	55	155	168	163	179	88	220	231	233	242
23	104	117	109	126	56	157	169	166	181	89	223	234	236	245
24	106	119	111	128	57	159	171	167	182	90	226	237	239	248
25	107	120	113	130	58	160	172	168	184	91	229	240	243	251
26	109	121	115	132	59	162	174	170	185	92	233	244	247	255
27	111	123	116	134	60	163	176	172	187	93	237	248	252	259
28	112	124	118	135	61	165	177	173	188	94	242	253	257	263
29	114	126	120	137	62	167	179	175	190	95	247	258	262	268
30	116	128	122	139	63	168	180	177	192	96	253	264	269	273
31	117	129	124	141	64	170	182	179	193	97	260	271	277	280
32	119	131	125	142	65	172	184	180	195	98	269	279	286	289
33	121	133	127	144	66	173	185	182	197	99	284	295	302	303

The above table shows that scores on the 1934 edition average about fourteen points higher than equivalent scores on the 1933 edition. The question of interpretation immediately arises. Is the difference due to a change in the difficulty of the test or is there a factor of selection of colleges sending in records? There were 158 colleges for which we had records on both the 1933 and the 1934 tests. In 1933 these colleges sent in 31,461 records and in 1934, 36,734 records were received from the same colleges. There is no apparent reason to believe that the quality of students in such a large group of colleges would have changed to any considerable extent. The comparison of the equivalent scores based on these records is shown in the table following. It is clear that the difference in the two editions represents a change in the test. This result was anticipated as a result of changing the directions for the analogies test and for the opposites test. This year there were fewer students who made extremely low scores. More students understood what the task was, and scores therefore represent more valid measures of ability. In both tables of equivalent scores it is seen that in the upper ranges of ability the equivalent scores become almost identical.

Equivalent Scores for 1933 and 1934 Editions

Based on reports for 1933 and 1934 editions received from 158 colleges.

Number of students 1933 = 31,461
Number of students 1934 = 36,734

Per-centile	*Score 1933*	*Score 1934*	*Per-centile*	*Score 1933*	*Score 1934*	*Per-centile*	*Score 1933*	*Score 1934*
1	39	52	34	128	145	67	184	198
2	48	61	35	130	146	68	185	199
3	54	68	36	132	148	69	187	201
4	59	73	37	134	150	70	189	203
5	63	78	38	135	151	71	191	205
6	67	82	39	137	153	72	193	207
7	71	85	40	139	154	73	195	209
8	74	89	41	140	156	74	197	210
9	77	92	42	142	158	75	199	212
10	80	95	43	144	159	76	202	214
11	83	98	44	145	161	77	204	216
12	85	101	45	147	162	78	206	218
13	87	103	46	149	164	79	208	220
14	90	105	47	150	165	80	211	222
15	92	108	48	152	167	81	213	225
16	94	110	49	153	169	82	215	227
17	97	112	50	155	170	83	218	229
18	99	115	51	156	172	84	220	231
19	101	118	52	158	173	85	223	234
20	103	119	53	160	175	86	226	237
21	105	121	54	161	176	87	229	239
22	107	123	55	163	178	88	233	242
23	109	125	56	165	179	89	236	245
24	110	127	57	166	181	90	240	248
25	112	129	58	168	183	91	244	251
26	114	130	59	170	184	92	248	255
27	116	132	60	171	186	93	253	259
28	118	134	61	173	187	94	258	263
29	119	136	62	175	189	95	264	268
30	121	138	63	176	191	96	270	273
31	123	139	64	178	192	97	278	280
32	125	141	65	180	194	98	288	290
33	127	143	66	182	196	99	303	304

Some colleges have requested means and standard deviations for several years. The table below gives the mean gross scores and standard deviations of gross scores for the years 1927-1934.

Means and Standard Deviations for Gross Scores 1927-1934

Year	*Mean Score*	σ
1927	125.78	48.9
1928	144.26	55.0
1929	144.05	52.8
1930	141.50	56.3
1931	150.27	56.6
1932	164.43	57.3
1933	152.15	60.4
1934	176.65	57.3

Several suggestions concerning the test have been received during the year. These will be used in preparing the 1935 edition. The present edition of the Artificial Language test has been the most satisfactory that has been tried. The Opposites test will probably contain fewer very easy items and a larger number of more difficult items. An attempt will be made to simplify the instructions for the analogies test.

L. L. THURSTONE,
THELMA GWINN THURSTONE,
The University of Chicago.

The Educational Record

Published Quarterly by

The American Council on Education

Editor: George F. Zook

Volume 16 July, 1935 No. 3

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Annual Subscription, $2.00

Entered as second-class matter June 8, 1932, at the Post Office at
Washington, D. C., under the Act of August 24, 1912.

THE WHITE HOUSE
WASHINGTON

April 30, 1935.

MY DEAR DOCTOR ZOOK:

I regret exceedingly that the pressure of public affairs prevents me from accepting your very kind invitation to speak at the Annual Meeting of the American Council on Education. I send you my warm greetings and my best wishes for a successful meeting.

The schools and colleges are in the midst of a social life which is developing rapidly. It is the business of government to see that the benefits of these changes are spread to the greatest possible number of our citizens. Without, however, the aid of a far flung educational system in developing the capacities of individuals to produce material comforts and to react intelligently to public problems, the efforts of the Government would be fruitless indeed. All the possibilities of a democracy rest squarely upon education.

Hence, we must do everything we can to improve the processes and the organization of education. Small school districts like most small units in government are in most instances inefficient, uneconomical and unnecessary. We need better trained teachers and more schools with modern teaching equipment. If the schools fall behind in these things we shall all suffer in the common misfortune.

I wish for the American Council on Education abundant success in helping to solve the many problems which face American education today.

Very sincerely yours,

Franklin D Roosevelt

Doctor George F. Zook,
Director, American Council on Education,
744 Jackson Place,
Washington, D. C.

The Eighteenth Annual Meeting

"Unoccupied Areas in Education"

THE Eighteenth Annual Meeting of the American Council on Education was held in the lecture room of the National Academy of Sciences, Washington, D. C., May 3–4, 1935.

The attendance at the meeting was the largest in the history of the Council with 22 constituent members represented by 39 delegates, 59 institutional members by 108 delegates, and 7 associate members by 10 delegates. In addition guests attended from the various foundations, governmental departments, and associations interested in the development of the Council's program.

Dr. Sidney B. Hall, First Vice-Chairman of the Council, presided in the absence of Dean William F. Russell, Chairman, who was in Paris as the Council's delegate at the Conference of Directors of Higher Education.

Dr. Hall asked the Secretary, the Rev. George Johnson, to read a letter from President Franklin Delano Roosevelt wishing the Council a successful meeting and regretting his inability to attend. The letter is printed as a frontispiece in this issue of the RECORD.

The minutes of the last meeting in May, 1934, were read and approved, and the Treasurer's report was submitted in writing.

Dr. Harold G. Campbell, Superintendent of Schools of New York City, addressed the Council on the subject "Problems Facing Young People in Urban Centers," as a part of the general theme of the meeting, "Unoccupied Areas in Education." Dr. Campbell's address is printed in full in this issue. (See page 288.)

The second speaker, Dr. William F. Ogburn of the University of Chicago, and author of the pamphlet "You and Machines" published by the Council, discussed "Non-Intellectual Aspects of Personality." Dr. Ogburn's paper is printed also in this copy of the RECORD. (See page 293.)

In the discussion which followed, Dr. Campbell and Dr. Ogburn conducted an interesting forum on personality development with contributions from President E. C. Elliott, Dr. Laura Zirbes, Commissioner Studebaker, President Rufus B. Von Kleinsmid, Dr. Joseph Mayer, President R. M. Hughes and other.

At this point Mrs. Franklin D. Roosevelt arrived at the meeting and was invited to address the group. Mrs. Roosevelt spoke informally and commended the Council for the development of the Youth Project. She urged educators to maintain a sympathetic understanding in working with young people, and asked that youth be given a voice and a responsibility in constructive planning for themselves.

The last speaker on the morning program, Dr. John W. Studebaker, United States Commissioner of Education, discussed "A Program for the Office of Education." (See page 301 for Commissioner Studebaker's paper.)

The delegates and visitors were guests of the Council at a buffet luncheon at the Cosmos Club.

The afternoon session opened with the Chairman's address of Dr. Sidney B. Hall, State Superintendent of Public Instruction of Virginia. His paper, "The Core Curriculum Plan in a State Program," is printed in this issue. (See page 277.)

Dr. W. W. Charters, Ohio State University, discussed "The Motion Picture in Education," and Dr. C. S. Marsh, Associate Director of the Council, spoke on "A Changed Concept for the Civilian Conservation Corps." (See page 312 for Dr. Charter's address.)

The afternoon session closed with a paper by Dr. Goodwin Watson, Columbia University, on "The Development of Human Resources Through Education." An elaboration of Dr. Watson's paper, which was submitted to the National Resources Board as the Council's contribution, will be printed in the October issue of the RECORD.

On Friday evening, May 3, at eight o'clock, the delegates to the session honored Dr. Charles Riborg Mann, Director-

Emeritus of the Council, with a dinner at the Mayflower Hotel. Places were laid for 200 and at the speakers' table were: Mr. and Mrs. Charles Riborg Mann, Mr. and Mrs. George F. Zook, General and Mrs. Robert I. Rees, Senator Royal S. Copeland, Senator and Mrs. Warren R. Austin, Mr. Oscar L. Chapman, Mr. John W. Studebaker, Mr. and Mrs. Willard E. Givens, Mr. Frederick B. Robinson, Mr. Sidney B. Hall, Mr. Samuel Capen, Mr. David A. Robertson, Mr. John H. Mac Cracken, Mr. Robert L. Kelly, and Mr. C. S. Marsh.

(See page 331 for a summary of addresses at the dinner.)

The Saturday morning session of the eighteenth annual meeting was opened by the Director's Report of Dr. George F. Zook. Dr. Zook's complete report is printed in this RECORD. (See page 250.)

Dr. C. H. Marvin, Chairman of the N.R.A. Committee, reported the activities of his committee during the past year. He reviewed the actions which obtained an exemption for colleges and universities from certain provisions of the N.R.A., and summarized the development of the National Security Act. Dr. Marvin emphasized the point that in following federal legislative actions the Council's committee was calling attention to the fact that there should be no differentiation in the attitude of Congress toward publicly administered and privately administered institutions, since both are a part of the integrated public educational system.

Dr. George A. Works of the University of Chicago, as a member of the Standards Committee of the Council, spoke on "A New Basis for the Accreditment of Higher Institutions." (See page 321 for Dr. Work's paper.)

Dr. John K. Norton, Teachers College, Columbia University, Chairman of the *Committee on Education and Government*, reported the studies of his committee dealing with the relation of the various levels of government to the financing of education. Tabulations were presented by Dr. Norton showing the relative ability of the various states to support education, as indicated by the amount of tax revenue which might have been collected under the Model Tax Plan. Another compilation covered the absolute ability of the states to support an acceptable minimum program of education. A later issue of the RECORD will contain a complete report of Dr. Norton's committee.

The business session of the Council followed.

Upon recommendation of the Executive Committee, the office of Assistant Treasurer was established with such duties as may be assigned to him by the Treasurer.

The Executive Committee recommended the discontinuance of publication of the standards for the accreditment of colleges, universities, and teacher-training institutions, adopted by the Council in May, 1934. The recommendation developed from the decision of the Council's Standards Committee that the standards were no longer progressive. President Raymond Walters, Chairman of the Standards Committee, reported that the committee in discussing accrediting voted an expression of sympathetic interest in the new qualitative standards of the North Central Association of Colleges and Secondary Schools. After discussion, the recommendation was approved.

The amendment to the constitution recommended by the Problems and Plans Committee was read by the Secretary. The suggested amendment concerning paragraph 2 of Section 5 of the Constitution follows:

> "The Council shall also elect a salaried *President,* who shall be the chief executive officer. He shall have general administrative supervision of the affairs of the Council and shall be responsible for the carrying out of such plans and policies as the Council, or its executive committee, may approve. He shall be *ex officio* a member of the Executive Committee and of all standing committees. He shall report annually to the Council, and shall make such other reports as the Chairman of the Council may request.
>
> "All officers, except the President, shall be elected at the Annual Meeting, and their terms of office shall begin immediately following election."
>
> Paragraph 6: "Insert word 'President' where the word 'Director' appears."

The amendment also provided for the changing of the title of Director-Emeritus to President-Emeritus.

After discussion the amendment was approved.

On joint nomination of the Problems and Plans Committee and the Executive Committee the following were elected to membership in the Problems and Plans Committee: Class of 1939, James B. Conant, Paul C. Stetson and Mark A. May.

The Treasurer's report and the budget for 1935-36 were approved by the Council.

It was moved and passed that the date of next year's meeting be referred to the Executive Committee with power to act.

President Eliot presented the report of the Committee on Nominations, and the Secretary was instructed to cast a unanimous ballot for the nominees, who were duly declared elected as follows: Chairman, Dr. Lotus D. Coffman, president of the University of Minnesota, representing National Association of State Universities; First Vice-Chairman, Dr. Parke R. Kolbe, President of Drexel Institute; Second Vice-Chairman, Dr. Meta Glass, President of Sweetbriar College, representing the American Association of University Women; Secretary, the Reverend George Johnson, National Catholic Education Association; Treasurer, Mr. Corcoran Thom, President, American Security and Trust Company; Assistant Treasurer, Mr. F. P. H. Siddons, Secretary of the American Security and Trust Company. For the two vacancies on the Executive Committee, to serve for a period of three years, Dr. Sidney B. Hall, Superintendent of Public Instruction of Virginia, representing the National Education Association; and President R. M. Hughes of the Iowa State College.

After an informal address by the new Chairman, President Coffman, the meeting adjourned.

The Director's Report

I WISH herewith to submit this my first annual report as Director of the American Council on Education. Although the report covers the entire year ending April 30, 1935, it may be remembered that the present Director did not take up active duty until September 1, 1934.

I presume that the Director is accorded all the latitude he wishes relative to the character of his annual report. It would be possible to make such a report purely a factual one, or the Director might make the annual meeting occasion to discourse on a variety of subjects which seemed to him pertinent and timely. I shall attempt a little of both.

I am above everything else anxious that the Director's report may enable the members and friends of the American Council to know better what is going on. It is believed that the more acquainted people become with the activities of the Council the more enthusiastic they will be relative to its program and functions. A pamphlet describing the history and activities of the Council, recently printed, should serve the same purpose.

I do not believe, however, that the work of the Council can be understood fully without appropriate observations concerning the background or the significance of present or future undertakings. I shall, therefore, ask you to bear with me while from time to time I clothe the bare statements of the Council's activities and plans with a few personal interpretations.

MEMBERSHIPS

As is perhaps well known, the Council has three types of memberships: (1) Constituent, (2) Associate, and (3) Institutional. The following members have been added during the past year:

Constituent:	Association of American Medical Colleges
	Department of Secondary School Principals of the N. E. A.
	Jesuit Educational Association
Associate:	American Alumni Council
	National Council of Business Education
Institutional:	Duquesne University
	Incarnate Word College
	University of Denver

The constituent members, consisting of the important national and regional associations, send three representatives each to the Council meetings. The associate members, consisting of organizations having interests related to the work of the Council, name delegates without vote. The institutional members each select one representative on the Council. The membership at present is as follows: Constituent members, 26; associate members, 19; institutional members, 225; total, 270.

Had it not been for the unflagging loyalty of the constituent and institutional members, each of which pays $100 in fees, it would not have been possible for the Council to carry on such a significant piece of work in the past. If the Council is to develop in influence and service, its membership in each of these classes should be considerably enlarged. There are several educational associations of national consequence which ought to join us. Especially there are quite a number of colleges and universities that ought to lend their help and influence toward the accomplishment of the purposes for which the Council stands.

Finally, in this connection, attention is called to the fact that last year the Council widened the scope of its interests and field of action to include the whole realm of education. By this action the Council became truly comprehensive. It follows, therefore, that those agencies and organizations representing particularly elementary and secondary education should be given a greater opportunity to participate in the work of the Council. Particularly, it would seem to me that individual State and city school systems should be invited to become institutional members of the Council.

I trust that it will be clear from the beginning that the major purpose in this modification of policy is to broaden the basis of interest and influence of the Council rather than merely to enlarge its income.

There has naturally been some apprehension that, in view of the more comprehensive interests of the Council from this time on, its emphasis in the field of higher education would be lessened thereby. I feel sure that this will not be the case. Dean Marsh of the University of Buffalo, who directed the educational program in the Civilian Conservation Corps with conspicuous success, has just assumed his duties as Associate Director in the field of higher education. A large number of the projects and studies now under way in the Council are in the field of higher education. It is hoped that we may soon be able to establish a financial advisory service primarily for the colleges and universities. Indeed it seems clear to me that the Council should be able to render far greater service to the higher institutions than ever before.

FINANCES

The income for the regular running expenses of the Council during the fiscal year closing April 30, 1935, was $71,058.02; its expenditures for the same purpose, $58,979.89, leaving a balance of $12,078.13. Of the total income the members of the Council contributed $21,110 in dues. This amount represents a slight decrease over that received during the previous year from the same source.

The unusually favorable balance was due largely to the fact that the Council has been without the services of an Associate Director for most of the fiscal year. Also it is to be remembered that these figures do not include the income and expenditures of the Problems and Plans Committee, nor the money received and expended by the Council for its special projects.

The budget presented for your consideration at this meeting calls for certain increases in expenditures next year due largely to increases in staff and the contingent fund, including perhaps the net expenses of publishing the new edition of the Handbook of Universities and Colleges.

Fortunately the Council has this past year used only $30,000 of the $300,000 appropriated by the General Education Board for the overhead expenses of the Council. This fact enables the Council to revise certain other items of income; namely, membership dues, and reimbursement for services.

For years the institutional members have stood by loyally, paying dues for the support of the Council when in many instances they could ill afford to do so. I am happy to tell you that at the meeting of the Executive Committee on Thursday night it was decided to reduce the dues for all institutional members from $100 to $50 per year, effective at once. I believe that this decision will not only be welcome to the institutional members of the Council but that it will enable us to increase our membership list considerably.

The following grants have been received and accepted by the Executive Committee during the year:

From the CARNEGIE CORPORATION, a grant of $4,500 for a study of library facilities in education in Washington.

From the CARNEGIE FOUNDATION FOR THE ADVANCEMENT OF TEACHING, a grant of $5,000 for the continuation of certain studies related to the survey of modern language teaching.

From the GENERAL EDUCATION BOARD, for the use of the Office of Education, a grant of $40,000 for the preparation of study materials for use in the Civilian Conservation Corps Camps.

From the GENERAL EDUCATION BOARD, for the use of the Office of Education, a grant of $30,000 for a study of the Youth Problem.

From the GENERAL EDUCATION BOARD, for the use of the Committee of Twenty-One of the Regional Accrediting Associations, a grant of $25,000 for a study of the formulation of tentative standards or guiding principles of secondary education.

From the GENERAL EDUCATION BOARD, a grant of $500,-

000 for overhead expenses of a study of the care and education of American Youth.

From the JOSIAH MACY, JR., FOUNDATION, a grant of $5,000 for continued work of the Committee on the Relation of Emotions to the Educative Process.

From the PAYNE FUND, a grant of $7,500 for preliminary study in connection with the possible establishment of a national educational film institute.

A total of $617,000 for the year.

It is to be remembered that the American Council on Education is a council made up of representatives from educational associations and institutions. It differs markedly from its kindred organizations, the Social Science Research Council and the Council of Learned Societies, in that its membership is much larger and in that its studies and activities are intended as a basis for the formulation of fundamental policies in education. Hence it has so far not proved feasible, as in the case of the other councils, to hold several regular meetings of the American Council each year. It is hoped, however, that additional ways may be found to secure the active cooperation of all representatives from the several types of members in the Council. The success of the Council depends in no small measure on this joint attack upon common problems.

PROBLEMS AND PLANS COMMITTEE

In the meantime, the Council has provided itself with a most unusual means of counseling relative to major problems and activities. I refer, of course, to the Problems and Plans Committee. This committee, established in 1930 and composed of thirteen leading educators, has been supported with a generous subvention from the Julius Rosenwald Fund for its own meetings and those of its sub-committees. Not only is unusual insight into and consideration of educational problems assured by the quality of its membership, but by the excellent financial provision which has been made for the preparation of its business.

In this report no further specific attention will be given to the Problems and Plans Committee for the simple reason that a full consideration of the matters which have been before the committee would be almost identical with the major problems and activities undertaken by the Council. The Council could not possibly perform its functions without this or a similar committee.

SUB-COMMITTEES OF THE PROBLEMS AND PLANS COMMITTEE

It would, however, be unfair to pass over certain activities of the sub-committees of the Problems and Plans Committee. One of these, under the chairmanship of Dr. S. B. Hall, contributed much time and thought to the preparation of the youth project mentioned at more length later. Dr. A. B. Meredith's Committee on State Relations to Education will shortly publish a book entitled "Higher Education and the American State." This committee has another volume entitled "The Relation of Departments of Education to Other Departments of the State Government," about ready for publication.

Finally, you listened last year to a very interesting outline of the proposed activities of the Committee on the Relation of Emotions to the Educative Process. Since that time the committee has held a stimulating conference at Bar Harbor. The chairman of the committee has been conducting an exploration of the field and is expected to have a report ready in the early future. Already the second phase of the project is opening up, namely, the need for researches in this area in some concerted program. For this purpose the Josiah Macy, Jr., Foundation has made an additional grant of $5,000 to enable the committee to go forward in this field hitherto little touched and of great possible significance in the development of the educative process.

COMMITTEE ON STANDARDS

The Committee on Standards is attempting to deal with some of the fundamental problems in the accrediting of institutions. Specifically, it is considering the problems growing out of the disparity in the institutions accredited by the American Association of Teachers Colleges and by other accrediting associations recognized by the Council in the list of higher institutions published annually and used by the Council as a requirement for membership and for inclusion in "American Colleges and Universities."

Also a sub-committee has assembled and summarized a large amount of material regarding limitation in the number of students in professional schools. It is hoped that this report, written by the chairman, may be printed in an early number of the EDUCATIONAL RECORD.

Finally, the committee is recommending the abolition of the standards for colleges, junior colleges and teacher training institutions adopted and recommended by the Council in 1924. There was a time when these standards served a useful purpose, but, if the recent action of the North Central Association in abolishing all quantitative standards and substituting general criteria based on the institution's objectives and student personnel is in the right direction, the Council's sets of standards are now quite out of date.

Parenthetically, it is gratifying that the General Education Board has recently made a grant of money through the Council to the National Committee representing the various regional accrediting agencies to go forward with its studies relative to the accrediting of secondary schools. I believe that this is a most significant step. If through this study the ground can be cleared of the present meticulous quantitative method of evaluating the work of secondary schools, it should be much easier for the Youth Commission and other efforts at the reform of secondary education to bring about modification of secondary school practices without calling upon themselves what President Keppel once called "the wrath of God and the North Central Association."

New committees of the Council were organized and began operations during the year as follows:

Committee to Cooperate with the Education and Law Conference; Dr. C. R. Mann, Chairman.

Committee on Education and Government; Dr. John K. Norton, Chairman.

Committee on Educational Nomenclature; Dr. David A. Robertson, Chairman.

Committee on International Aspects of Education: Dr. I. L. Kandel, Chairman.

All of these committees have been hard at work. The Committee on International Aspects of Education is intended to serve as the educational section of the American National Committee on International Intellectual Cooperation, and also to facilitate the work of the International Bureau of Education at Geneva. Until the United States Government itself can join this organization, the Council may well serve as its representative in this country. At its meeting in New York a short time ago the committee considered and approved a plan to sponsor the preparation of a yearbook on international understanding through the public school curriculum.

There can be no doubt of the importance of this committee. It should serve as the Council's interpreter relative to problems of mutual interest to all nations. There are many of these problems, and our association with educational leaders in other countries should be of very great benefit to American education. It was my good fortune to attend the conference held by the International Bureau of Education in Geneva last summer. The chairman of the Council is now in attendance at a meeting of the Directors of Higher Education, which is being held in Paris. For this conference the Council prepared three special reports on (1) the organization of higher education in the United States; (2) the organization of scientific research outside the universities; and (3) the organization of instruction in biology in the United States.

The Committee to Cooperate with the Education and Law Conference under Dr. Mann's direction has given much time and attention to the character education project in the District of Columbia, described by Senator Copeland in his address before the Council last year. Plans for extending the committee's assistance to similar projects in Michigan, Utah, New York, and Iowa are under way. Several of these experiments bid fair to affect in a fundamental way the quality and trend of the educational program.

The committee also performed a notable piece of work last year in making a study of the types of socially useful work, particularly outside the institutions, which could be performed by students on the Federal Student Aid program.

The Council also cooperated with the U. S. Office of Education in holding a conference November 17, 1934, to consider desirable adjustments in the student aid program. In my opinion no part of the Federal relief program has been more wisely handled than the student aid program, largely because the institutions have been given a comparatively free hand in dealing with it. I believe, furthermore, that not only has the program enabled thousands of students to remain in college who otherwise would have been unable to do so, but it has taught both the colleges and the students something of the educative value of work carried on as a supplement to the activities of the classroom. All of us have a great deal to learn along that line.

TESTS

One of the Council's greatest contributions to the development of education has been its two test services; namely, the psychological tests developed by Professor and Mrs. Thurstone, and the Cooperative Test Service under the leadership of Professor Ben D. Wood.

The psychological test for colleges and universities was first issued by the Council in 1924. Since that time its use has grown rapidly until in 1935, 168,547 copies were used in 620 higher institutions. This distribution is considerably larger than the sale of any similar test on the market. Information concerning the use of these tests in 240 colleges and universities for the year 1934-35 is reported in the April number of the EDUCATIONAL RECORD.

During 1933 a psychological test suited to high school use was begun. Doubtless this test will also gradually attain extended use. Norms for each high school grade based on a total of about 8,000 cases have been set up. Henceforth only the older forms of the college psychological test will be available to the high schools.

The Cooperative Test Service, for which an appropriation of $500,000 was made several years ago, is now in the fifth year of the ten-year period covered by the appropriation. In most of the important subjects four forms have been published. From two to six additional forms in the several subjects have been made comparable. Additional manuscripts are on hand, so that the Test Service is well along toward its objective of ten comparable forms in each of the important subjects and a somewhat smaller number in other subjects. This is truly a remarkable undertaking to have been organized and carried so far forward in such a short time. Already, however, there are serious problems ahead, caused on the one hand by the depression and on the other by the difficulty of educating school people to the proper use of tests. "The first and major consideration," declares Professor Wood in a recent report, "is that the tests should always be kept under the control of some non-commercial agency whose policies will be dictated by educational welfare rather than by considerations of profit. If we grant this basic desideratum, it seems to make inescapable the conclusion that the tests can never be turned over to a commercial printer, not even under the most liberal contracts which publishers thus far appear to be willing to make. On the other hand, it appears almost certain that for two or three years at least there is no possibility of selling enough tests to put the service on a self-supporting basis. The commercial houses are still selling tests that are more than ten years old in much greater quantities than we are selling tests which are new and which are comparable with preceding issues. . . . If only 10 per cent of the school people in the country understood the potential value of comparable tests, there would be no difficulty in putting the Cooperative Test Service on a self-supporting basis."

Notwithstanding the difficulties to which Dr. Wood alludes, $18,491.87 profit from the sale of tests has already been built up. Furthermore, there is a developing interest in the possibility of using the objective tests not only in the process of selecting students but also in the selection of teachers for teaching positions. It seems likely that in the early future the Council will hold several round tables to discuss some of these possibilities.

Each year during the last three years the Council, through the Test Service, has cooperated in holding a very interesting conference at which the development of personnel work, including the use of tests, was the central feature of the program.

WASHINGTON LIBRARY PROJECT

In October, 1934, the Council received a grant of money from the Carnegie Corporation to carry on a study of the libraries in Washington, D. C., with particular reference to their facilities in education. This project has been pursued vigorously both through questionnaire and personal inspections under the direction of Dr. David Spence Hill.

The number of libraries in Washington is astonishingly large, about 240; approximately 100 of them are scattered in the various government agencies. The study is now nearing completion. It should reveal several important possibilities:

1. More accurate and extensive information concerning the number and character of the libraries.
2. Better cooperation between the libraries, especially between the Library of Congress and the Library of the Office of Education.
3. The more extensive use in research and advanced study of the unusual facilities offered by the libraries in Washington in the field of education.
4. The advisability of setting up similar studies in a number of other large centers of population.

One of these possibilities deserves particular comment, namely, the need to establish here in Washington a facilitating agency for the use of the unusual resources which Washington possesses in almost all fields of research and scholarship. As all of you know, this is not a new idea. It has found expression in a great variety of suggestions, all the way to the establishment of a national university. No one knows what may be the ultimate solution of the problem, but my own belief is that most of our need could be met by a comparatively inexpensive facilitating agency whose business it would be to cooperate with the Government and the local universities in making available to students from all parts of the country the extraordinary facilities provided in Washington for advanced study and research.

HANDBOOK OF COLLEGES AND UNIVERSITIES

In 1928 and again in 1932 the Council undertook the publication of a Handbook of Colleges and Universities in the United States. Institutions on the list of the Association of American Universities and the several regional associations were included in the volume. There was a concise statement containing the major facts relative to each institution. But the volume has been far more than a handbook of higher institutions. It contains the best single statement we have relative to the whole system of higher education in this country, including all forms of control both direct and indirect.

It is time to revise and print a new edition of this valuable work. I trust that no time is lost in doing so. It is extremely useful both at home and abroad.

HUMAN RESOURCES

You have already heard a very interesting statement concerning the significance of a national research program for the development of human resources to parallel the extended research programs now fostered by industry and the Government in the field of material resources. Every thinking citizen knows that the development of one without the other is both futile and impossible. Yet the development of human resources except on the physical side has been all but neglected by the Federal Government.

Fortunately, the American Council on Education has been able in recent months to render an important service in this area. In creating the National Resources Board on July 1, 1934, President Roosevelt wisely appreciated the fact that the nation's wealth consisted not merely of material resources but of the capacities and qualities of its citizens. Hence the National Resources Board has sought not only the aid and advice of the National Research Council, representing the physical and biological sciences, but also of the Social Science Research Council and of the American Council on Education. Upon the invitation of the National Resources Board the American Council named three members of an advisory committee to the board and drew up a concise statement recommending certain research projects in the field of human resources which might be prosecuted with funds set aside from the large work relief appropriation recently made by Congress. It is understood that certain of these projects are now under consideration by the administration.

In the meantime, the Council is cooperating with the National Resources Board in drawing up a statement for inclusion in its final report setting forth the fundamental significance of a program for the development of human resources and the ways and means of undertaking it. The prosecution of such a program would call for the cooperative effort of a number of Federal agencies, including the U. S. Office of Education. If out of this activity of the Council there comes such a program, it would be an accomplishment of major consequence.

YOUTH PROJECT

What to do about the care and education of young people from the time they acquire the elementary tools of knowledge, represented approximately by the completion of the sixth grade, down to the time five to ten years later when usually they are settled in a vocation and perhaps in their own homes, has become a national problem of first consequence. Formerly a large proportion of these young people, partly by choice and partly by force of circumstances, left school to go to work at a great variety of humble tasks. In the school of hard experience they often learned more than their more fortunate companions who went on through high school and college.

Now of a sudden all these situations have changed. The applications of science have enabled the adults to produce all that we need in the way of food, clothing and shelter, with far less effort than a few years ago. Except on the farms there is little work for young people to do. It is said that in the railroads 16 per cent of the employees in 1925 were under twenty-five years of age, whereas today less than 3 per cent of them are in this age group. As a result, young people have flocked into secondary schools in unprecedented numbers or they walk the streets, vainly searching for an opportunity to go to work. Even those who have had the perseverance to prepare themselves well often suffer along with those of limited education.

Is it not clear that America must face a series of readjustments before this problem with its manifold aspects can be solved? To a considerable extent it is a problem for the school, but not exclusively. If all young people are to remain in school for a longer period, then the schools must find far better ways of analyzing the special abilities and interests of their students. But they must cooperate with industry, agriculture and the home in setting up work experiences that are real and educative. Young people must also be given the utmost opportunity to come into practical contact with the institutions and problems of local, state and national government. Learning by doing is as necessary in the practice of democratic government as it is in the practice of a profession or a vocation. The need for building up more intimate relationships between the school and wholesome recreation activities is equally obvious. In other words, the youth problem is a problem of proper care as well as of education. Unemployment, crime and inadequate educational provisions all testify to the need for a comprehensive inquiry into and the earliest possible remedies for the youth problem.

During the past seven months the Council has given this problem extensive consideration, and I am happy to announce at this time that as a result of our efforts the General Education Board has recently made a grant of $500,000 to the Council to pay the overhead expenses of a project in this field. An additional $300,000 is available when individual projects are accepted.

The project is to be in charge of a Commission of outstanding citizens, including a few educators, who are to determine major plans and policies. There will be a director with competent associates and an adequate staff. Doubtless there will be a series of inquiries over a wide area to be succeeded, possibly, by demonstrations of desirable practice through cooperation with local authorities and school officials. The project has been set up for a period of five years, but it may run for a longer period.

I need not tell you that the project relative to the care and education of youth gives to the American Council on Education a remarkable opportunity to help solve one of our most troublesome national problems. I trust that the task may be prosecuted both wisely and vigorously.

A NATIONAL EDUCATION FILM INSTITUTE

The application of discoveries in science is revolutionizing the older methods of life on the farm, in the factory and in the office. Men and women earn their food, clothing and shelter through new and improved ways. Vocational changes are sometimes painful, but they are accepted as a part of normal life.

In recreation, too, whether under public or private auspices, there is a rapid development of the devices and facilities whereby people may enjoy their leisure; witness the rapid increase maintained even in the depression of golf courses, moving picture theaters, pleasure automobiles and public parks. Here the public demands the latest, most satisfying facilities in the way of pleasure and recreation.

Can the same thing be said relative to the development of instruction in the schools? Do you not see, as I do, in the background of these marvelous developments in industry, recreation and other aspects of modern life thousands of schools in this country where the materials and mechanical devices of instruction are little, if any, better than they were a generation ago? I am convinced, for example, that in many fields of school work the textbook is obsolete and should be succeeded by types of teaching materials and activity programs that are up to date and meaningful to the individual student. In other words, if the schools are to keep pace with other social agencies, they must adopt the most modern devices of instruction or surrender their influence to the county agricultural agent, the motion picture theater, and the radio.

I wish to call your attention briefly to the need for facilitating the use of one of these modern teaching devices in the schools. I refer to motion pictures.

The Director has given considerable attention to the possibility of establishing in this country a national educational film institute. As was pointed out very clearly yesterday by Dr. Charters, there is no longer any doubt about the remarkable teaching possibilities of motion pictures in school and college work. But the simple fact remains that relatively they are very little used. Indeed, less than 10 per cent of the public and private schools in the United States make any systematic use of the motion picture as a teaching aid.

Naturally, in a time when many schools have not been able to maintain their supply of textbooks and other traditional school facilities up to standard it has not been easy to introduce new types of teaching equipment involving additional expenditure of money. There are, however, other serious reasons for the delay in using films in the classroom. There is no adequate supply of films suitable for classroom use. The projector situation is not satisfactory, and the problem of distributing films to the schools has not yet been solved.

In countries with centralized systems of education the entire problem of films in the schools is solved in large part by the central government. Even in Italy, Germany and France, however, it has proved desirable to establish supplementary agencies to promote the use of films in the schools. About a year and a half ago, following an extended study, there was established in London the British Film Institute for the purpose of facilitating the use of motion pictures in the schools. It has been remarkably successful.

A similar step should be taken in this country. Education cannot afford to be behind commercial establishments in teaching devices. The Council has received encouragement on every hand in its consideration of this important problem. It will, of course, be necessary to seek adequate financing of the project. A subsidy from the National Government, as in Great Britain, is out of the question. Neither should the Institute, for obvious reasons, be financed by industry. It would seem, therefore, that until it can secure compensation from the schools for its services it will be necessary to finance it privately.

Once the Institute is started it should bring about important changes in teaching practices. It should, therefore, be the expression of organized education. It is one of the Council's chief functions to identify and get under way projects of this nature which bid fair to affect so significently the development of American education.

CONCLUSION

It has been quite impossible to describe in detail all of the undertakings of the Council. Several major activities, notably in educational finance, human resources, standards of accrediting agencies and the Economic Security Bill, will be described by representatives of the several committees dealing with these subjects. Certain other activities well deserving extended mention will be omitted for want of time and space.

I hope that as a result of this statement you will feel a little better acquainted with the work of the Council. Furthermore, I trust that the varied activities in which it is engaging will appeal to you, not only as being significant generally in American education, but as reaching into every individual higher institution and school system in the country.

I have enjoyed the experiences of the past year and I am looking forward to the new and enlarged opportunities in the future. I am, however, entirely conscious that whatever measure of success the Council attains is due to the efforts of others. We are all indebted to Dr. C. R. Mann and his associates for the rich heritage which they left behind them. The enthusiastic spirit of cooperation which is evident among the members, committees and friends of the Council is most reassuring. With such a heritage and with so great cooperation the American Council on Education may confidently look forward to new and greater service to American education.

GEORGE F. ZOOK.

The Budget, 1935-36

A. CURRENT OPERATIONS OF THE OFFICE

	Estimated Resources 1934–35	*Actual Receipts 1934–35*	*Estimated Resources 1935–36*
Membership dues	$22,670.00	$21,110.00	$11,500.00
Reimbursements for services	9,000.00	11,941.77	12,000.00
Special Grants	30,000.00	29,918.30	50,000.00
Bank interest		12.65	
Bank balance, April 30, 1934	8,075.30	8,075.30	
Bank balance, April 30, 1935			12,078.13
	$69,745.30	$71,058.02	$85,578.13

EXPENDITURES

	Fiscal Year 1934–35 Expended	*Fiscal Year 1935–36 Proposed*
General Operation:		
Rent	$ 4,075.04	$ 4,400.00
Salary of Director	15,000.00	18,000.00
Salary of Director Emeritus	9,400.00	7,500.00
Salary of Associate Director	3,080.00	9,558.36
Salaries of Assistants	13,370.51	18,228.00
Traveling expenses, administrative	2,384.30	3,500.00
Stationery, printing and supplies	939.69	1,500.00
Telephone and telegraph	600.53	750.00
Postage	562.72	750.00
Furniture and appliances	973.66	1,000.00
Educational Record	4,024.47	5,000.00
General expense	741.20	1,500.00
Committees		5,000.00
Committee on Standards	349.65	
Committee to Cooperate with the Education and Law Conference	3,462.24	
Bank check tax	15.88	
Contingent		8,891.77
	$58,979.89	$85,578.13

B. Grants Available for Special Projects, 1935–36

Foreign Language Study Fund, balance, April 30, 1935	$ 5,596.59
Cooperative Test Fund	60,000.00
Committee on Problems and Plans in Education	20,108.57
Committee on Personnel Methods, balance April 30, 1935	698.57
Monograph on Examinations, balance April 30, 1935	4,368.18
Exploratory Study of Unitary Differential Traits in Human Nature, balance April 30, 1935	1,923.33
National Survey of School Finance, balance April 30, 1935	302.13
Exploratory Study of Relation of Emotions to the Educative Process	8,497.77
Committee on Education and Government, balance April 30, 1935	874.34
Conference Fund, Office of Education	4,594.18
Committee on Study of Occupations Requiring Knowledge of Art, balance April 30, 1935	932.70
Study of Library Facilities in Education in Washington, balance April 30, 1935	744.37
Film Institute, balance April 30, 1935	4,157.98
Committee on Youth Problems	25,037.37
Commission on Care and Education of American Youth	100,000.00
Committee of Twenty-one of the Regional Accrediting Association	25,000.00
"Choosing-A-Career" Fund, balance April 30, 1935	51.10
Total Estimated Resources	$348,465.31

Treasurer's Report

AMERICAN SECURITY AND TRUST COMPANY

Washington, D. C., *May 2, 1935.*

DR. GEORGE F. ZOOK, *Director,*
American Council on Education,
Washington, D. C.

DEAR DR. ZOOK:

I herewith enclose statements of F. W. Lafrentz & Company, being audit for the period from May 1, 1934, to April 30, 1935, on the following accounts of the American Council on Education:

General Fund
Modern Foreign Language Study Fund

I desire to submit these papers as my Annual Report as your Treasurer for the past year.

Very truly yours,

CORCORAN THOM, *Treasurer,*
American Council on Education.

AMERICAN COUNCIL ON EDUCATION

FINANCIAL STATEMENT

From May 1, 1934, to April 30, 1935

RECEIPTS

Constituent Members	$ 2,400.00	
Associate Members	150.00	
Institutional Members	18,560.00	
		$ 21,110.00
Contributions:		
For General Support, General Education Board	$29,918.30	
To Committee on Problems and Plans in Education, Julius Rosenwald Fund	4,901.26	
To Study of the Relations of Emotions to Educative Process, Josiah Macy, Jr., Foundation	6,200.00	
To Conference Fund, Office of Education, General Education Board	7,970.07	
To Institute of Women's Professional Relations (sundry)	5,763.17	
To Study Materials, CCC, Office of Education, General Education Board	27,702.50	
To Committee on Study of Occupations Requiring Knowledge of Art, Carnegie Corporation	2,580.00	
To Study of Library Facilities in Education in Washington, Carnegie Corporation	4,500.00	
To Preliminary Conferences, Film Institute, Payne Fund	7,500.00	
To Committee on Youth Problems, General Education Board	5,000.00	
		102,035.30
Sale of Psychological Tests		12,827.77
Sale of Record Cards, Scales	$ 2,942.01	
Sale of Conference Reports	8.45	
Sale of Citizens Conference Reports	.55	
Sale of State Support for Education and Research Problems	410.65	
Sale of bulletins, pamphlets, etc. (Institute of Women's Prof. Relations)	484.90	
Sale of "You and Machines"	354.97	
		4,201.53
Carried Forward		$140,174.60

Brought Forward		$140,174.60
Reimbursements for Administration of Grants:		
Cooperative Test Fund	$ 3,500.01	
Modern Foreign Language Study	100.00	
Conference Fund, Office of Education	398.50	
Study Materials, CCC, Office of Education	1,385.12	
Committee on Problems and Plans in Education	147.03	
Committee on Relations of Emotions to Educative Process	310.00	
Committee on Study of Occupations Requiring Knowledge of Art	129.00	
Study of Library Facilities in Education in Washington	225.00	
Film Institute	375.00	
		6,569.66
"Choosing-A-Career" Fund—royalty		51.10
Sale of old furniture		45.00
Interest		12.65
Total Receipts		$146,853.01
Cash on hand, May 1, 1934, American Security & Trust Company		34,991.96
Study of Relations of Emotions to Educative Process, petty cash fund		100.00
		$181,944.97

DISBURSEMENTS

Salaries:			
Director		$15,000.00	
Director Emeritus		9,400.00	
Associate Director		3,080.00	
Assistants		13,370.51	
			$ 40,850.51
Rent			4,075.04
Stationery, Printing and Supplies			939.69
Postage			562.72
Telephone and Telegraph			600.53
General Expense			741.20
Traveling Expense—Director, et al		$ 1,420.19	
Traveling Expense—Executive Committee		964.11	
			2,384.30
Furniture and Fixtures			1,018.66
Publication Expenses, EDUCATIONAL RECORD:			
Expenses of RECORD	$3,774.97		
Reprints	837.13		
		$ 4,612.10	
Less: Subscriptions to RECORD	$ 426.35		
Subscriptions to Reprints	161.28		
		587.63	
			4,024.47
Carried Forward			$ 55,197.12

Brought Forward		$ 55,197.12
Psychological Test Experiment:		
Psychological Tests	$ 4,053.89	
Thurstone—General Expense	3,401.77	
		7,455.66
Committee on Personnel Methods		2,373.24
Monograph on Examinations		133.32
Committee on Problems and Plans in Education		5,918.99
Exploratory Study Unitary Differential Traits in Human Nature.		2,322.43
National Survey of School Finance		602.29
South Carolina Survey—Refund of appropriation to Carnegie Foundation, with interest from Oct. 27, 1932 to June 15, 1933.		10,000.00
Study of Relations of Emotions to Educative Process		6,566.82
Committee on Education and Government		1,742.93
Conference Fund—Office of Education		5,405.82
Institute of Women's Professional Relations		5,986.03
Study Materials, CCC—Office of Education		25,733.19
Committee on Study of Occupations Requiring Knowledge of Art		1,647.30
Study of Library Facilities in Education in Washington		3,755.63
Film Institute		3,342.02
Committee on Youth Problems		4,962.63
Committee on Standards		349.65
Committee to Cooperate with the Education and Law Conference		3,462.24
Tax on bank checks		15.88
Total Disbursements		$146,973.19
Cash on hand, April 30, 1935, American Security & Trust Company		34,971.78
		$181,944.97

SUMMARY OF CASH AT APRIL 30, 1935, BY FUNDS

American Council on Education—General		$12,078.13
Committee on Personnel Methods:		
General	$ 625.37	
Sale of Conference Reports	73.20	
Monograph on Examinations	4,368.18	
		5,066.75
Committee on Problems and Plans in Education		155.24
Exploratory Study Unitary Differential Traits in Human Nature		1,923.33
Committee on National Survey of School Finance		302.13
Study of Relations of Emotions to Educative Process		3,497.77
Committee on Education and Government		874.34
Conference Fund—Office of Education		2,564.25
Institute of Women's Professional Relations		262.04
Study Materials, CCC—Office of Education:		
General	$2,003.06	
Sale of "You and Machines"	321.22	
		2,324.28
Committee on Study of Occupations Requiring Knowledge of Art		932.70
Study of Library Facilities in Education in Washington		744.37
Film Institute		4,157.98
Committee on Youth Problems		37.37
"Choosing-A-Career"		51.10
Cash on hand, April 30, 1935:		
American Security and Trust Company		$34,971.78

MODERN FOREIGN LANGUAGE STUDY FUND

STATEMENT OF RECEIPTS AND DISBURSEMENTS

From May 1, 1934 to April 30, 1935

RECEIPTS

Contribution:		
The Carnegie Foundation for the Advancement of Teaching to the Committee on Modern Language Teaching		$5,000.00
Royalties:		
Coleman's Analytical Bibliography	$ 29.70	
Tests	685.05	
		714.75
Total Receipts		$5,714.75
Cash on hand, May 1, 1934		2,807.58
		$8,522.33

DISBURSEMENTS

Salaries and Wages	$ 307.29
Supplies and Equipment	2.00
Printing and Publicity	2,353.87
Communications	22.74
Travel and Meetings	133.62
Contingent	106.00
Tax on Checks	.22
Total Disbursements	$2,925.74
Cash on hand, April 30, 1935:	
American Security and Trust Company	5,596.59
	$8,522.33

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1935-1936

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The Core Curriculum Plan in a State Program[1]

FOR the past thirty years rapidly increasing school enrollments have focused the attention of authorities upon problems of building, finance, and standardization in the administration and organization of education. This emphasis on material things has influenced the work of the classroom to the extent that instruction has tended to become mechanical. Reliance upon various types of reorganization has largely characterized efforts to improve instruction. Examples of these efforts are the Junior High School, the Platoon organization, and the Gary Plan. As a device for improving instruction, the testing movement, one of the most influential developments of the period, has tended to give scientific sanction to standardization and mechanical methods of teaching and learning.

Of all the divisions of the school system the secondary school has had the most rapid expansion in numbers of pupils and in subjects offered. American secondary schools in the year 1890 enrolled from 5 to 10 per cent of boys and girls of high school age. Today city high schools enroll from 80 to 90 per cent of the secondary school population, and in the country as a whole, about 60 per cent of the youth of high school age are in school. It is reasonable to believe that in the near future it will be necessary for society to provide formal education for the entire secondary school population.

Developments in thinking in the physical and social sciences, changes in the social order, and the transformed character of the body of pupils composed of a large part of the secondary school population, demand a different kind of education than that which was desirable for the 5 per cent of the secondary school population in 1890.

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[1] This material and further elaboration of the idea are now in preparation as a chapter in a book to be published under the auspices of the Secondary School Curriculum Committee. The work of this chapter is being done by the speaker and Mr. Fred M. Alexander, of the Newport News High School, Newport News, Va.

Although attempts have been made to provide for the needs of the rapidly increasing number of pupils in the secondary school by adding new subjects and new courses, the present secondary school curriculum in majority practice is based upon essentially the same philosophy and techniques as the curriculum of a generation ago that served only a small and highly selected part of the secondary school population. Manifestly education realized through such mechanical processes, organizational and other external devices as those pointed out in the foregoing paragraphs, is inadequate for the needs of a new kind of society—economic, political, and social—now rapidly taking form as the result of fundamental changes due to technology and other influences.

To determine the kind of education that should be provided for the secondary school population is society's challenge to the profession of education. An examination of the welter of existing educational theories and practices reveals confusion and disagreement both among educational leaders and the rank and file as to the content, processes, and goals of secondary education. The way out of this educational confusion seems to lie in the making of fundamental choices from the best that creative social and educational thinking has to offer.

PHILOSOPHY

These fundamental choices when employed in their appropriate relationships will constitute the philosophy that is to serve as a guide for developing a new kind of curriculum for the secondary school. These choices will be determined by positions taken on the following basic considerations:

1. A clear-cut definition of the curriculum must be formulated.
2. A concept of education must be evolved and adopted.
3. A theory of progress must be espoused.
4. A definite position must be taken upon the social orientation of the school.

THE NEW SECONDARY CURRICULUM DEFINED

The new curriculum for the secondary school consists of all of the actual experiences that the child has under the direction of teachers and under the influence of the school. Everything the child does, all of the activities in which he engages, his informal contacts with his fellow students, his out-of-class activities, both at school and away from school—in short, all of his experiences in any way the school influences them make up the curriculum.

This concept of the curriculum embraces the entire life of the school; the out-of-class activities such as assemblies, clubs, athletics, etc., as well as formal instruction in the classroom. Some implications of this view of the curriculum are: the administration of the school should set up an environment that will provide boys and girls a favorable opportunity for the realization of democratic ideals, (1) by developing understanding and appreciation of human relations, (2) by developing attitudes for improving human relations through participation in school improvement, and by projecting their experiences into the future, and (3) in planning a better democratic social order that will increase the happiness and welfare of all. Teachers, clerks, janitors, and everybody connected with the school should accept responsibility for accomplishing the goals so set up. The entire school environment then becomes consciously organized and unified as a whole to influence and guide the behavior and character development of the pupil.

A CONCEPT OF EDUCATION

Any attempt to formulate a concept of education that will serve as a basis for the new secondary school curriculum involves the consideration of the views of education that control present majority practice in secondary education. These views are, (1) education as the acquiring of knowledge and information, (2) education as mental discipline, and (3) education as preparation. A brief analysis of each of these views of education is made for the purpose of pointing out their inadequacy as bases for the emerging secondary school curriculum.

Education as the Acquiring of Knowledge and Information.—Under this view of education accumulated knowledge is classified in arbitrarily chosen compartments and labeled as subjects for transmission to the young and immature. The usual classifications of knowledge such as history, science, English, mathematics, etc., when further subdivided form the subject curriculum. History in the secondary school under this process of division becomes ancient, medieval, modern, United States, and English history. Attempts to provide for individual differences and to utilize the rapidly increasing body of knowledge have resulted in the addition of new subjects until the work of the secondary school consists of a multitude of quarter or semester courses. The number has grown so large that a pupil can pursue only a few of the many courses offered.

Education as Mental Discipline.—This view of education holds that the content of subjects and their use in life are of small value when compared with the effect subjects have in training the mind. Usually the harder the subject and the more distasteful to the student, the more effective it is considered in providing mental discipline. Indeed, certain fields of knowledge are regarded as having inherent values in exercising the mind.

Education as Preparation.—This concept of education, a modification of the mental discipline theory, sets up the thesis that education is preparation for advanced studies or for future life. As another phase of this concept, education is viewed as training with the result that the knowledge, habits, and skills believed by adults to be necessary for the successful living of immature persons are set up by analysis of adult activities in the existing social order. This view of education has given free play to the technique of "job-analysis."

These three views of education accept the *status quo*, impose externally the content and process of education upon the learner, and they have little orientation in the present social order. Adult values, adult choices, and adult experience are the sole guides for the selection of subject matter and method. These views imply that the social order is static and that the individual is clay to be molded by the patterns of authority and tradition. The techniques and content resulting from these points of view are inadequate for discovering and creating new values in a dynamic and changing civilization.

Education guided by any or all of these views falls short of equipping the individual for successful participation in our dynamic society, which involves ability to appraise its conditions, to understand the agencies through which changes can be brought about, and to accept responsibility for improving the society in which he lives.

Manifestly knowledge and information are inadequate as ends of education. They are essential, however, when used as supporting evidence of ways in which social purposes, agencies, and movements influence human relations. Just as the steel framework of the skyscraper is valueless apart from its functions of holding together in relationship the refinements and useful elements that make the building a unit that serves its purpose, so knowledge and information fall short as goals of education. This is especially true when they are acquired apart from the present experience of the individual and are not used by the individual in relating his experiences when he is seeking to discover how social forces and agencies modify the individual and social life.

The concept of education that holds the greatest promise for achieving the ultimate aims of secondary education in the emerging democratic social order is the view of education as the development of personality.

Education as Development of Personality.—This concept of education is adopted as the desirable approach to the new secondary school curriculum. According to this point of view education is both a creative experience and a cooperative social enterprise. Personality is made up of the body, the mental life, and everything in the environment past and present that in any way affects the individual. Life is the process of continuous interaction of the individual and his environment. The individual relates the elements in every situation into new on-going experiences. The relationship thus achieved is more than a sum of the elements of the situation. It is something new and different. This relating is creative experience. The process of relating changes the environment as well as the individual. The stimulus of learning then is essentially social. Through the process of forming functional relationships the individual not only expands and increases the depth of his own experiences, but he also contributes to the meaningfulness of the experience of each other individual with whom he has contact.

Education, indeed, is much more and something different from learning about the remote past in order to prepare for a distant future. It is the constant development of meaningful present experience. This view of education does not neglect the heritage of the past. Guided by this concept of education the school sets the stage for the development of creative experience by enabling children working cooperatively together in groups to utilize the knowledge and information of the past that functions in enabling them to look into the future. Thus the past and future meet in the present in such functional relationships that the highest personal and social values are achieved.

Since stimulus to learning is essentially social, children's interests are social interests resulting from interaction with their environment. Purpose and drive to achievement have their origin, therefore, in the present interests of the learner. Initiative is realized and self-realization is achieved through participation with the group. From his interest in his radio a boy will develop interest in a group of related elements, for example, the announcer, the broadcasting artist, inventors, authors, advertisers, National Recovery Act, the scientific basis of mechanics, musicians, people, customs in his own and in other countries. Out of this group of related interests will grow a purpose which will cause the pupil to engage in a series of activities which will constantly expand and deepen his knowledge and experience and lead him to an understanding of the problems of communication, as well as dispositions to improve the means of communication for all.

This view of education leads to the utilization of more knowledge and information than does any other view previously discussed. Knowledge and information, however, are used by the learner as means for making generalizations, developing attitudes and appreciations, and acquiring the essential skills. The pupil experiences a need for acquiring the essential skills found in the three R's and learns knowledge and information in meaningful relationships as the basis for making generalizations. The equipment will be his own and not something temporarily memorized.

Personality is not integrated by learning descriptions of the past that are unrelated to the present experience of the learner. Personality is integrated through the process of resolving tensions. When tensions are not resolved, and the individual fails to resume a state of equilibrium, disintegration takes place. When the tension is resolved, the result is integration. The pupil on the secondary school level in his everyday life is confronted with a welter of conflicts and contradictions which constantly throw him into tensions. For example, the school restricts his freedom, his father is out of work and on relief, there is no employment for him, many of his fellow students enjoy luxuries which he cannot have, the future seems to have no place for him as a constructive member of society.

Individuals can resolve such tensions and become integrated through understanding of the conflicting alternatives in the contemporary situation, through making plans both as individuals and groups to improve the social situation, through making choices on the basis of available evidence. Since the individual and society are aspects of the same thing, through such a process integrated personality is developed and society is improved. This is meaningful experience.

The nature of our changing order will depend upon the social intelligence with which the school enables the rising generation to make its choices. It is clear that the emerging social order will be saved from chaos to the degree that all functions and processes of life such as economic, social, and intellectual are integrated with the developing personality in his social relationships as the integrating center. This implies that all of the educational agencies of society must work to this end.

The school as one educational agency must play its part in this process. To discharge its responsibility the school must become society-centered rather than child-centered or subject-centered. A subject-centered school provides a setting for looking backward for knowledge and truth, the method of reaction and absolutism in thought. The child-centered school provides a setting for the development of rugged individualism without adequate relationship to organized society. A society-centered school, with the social studies, language arts, science, and general mathematics organized on a functional basis as the core of the curriculum can provide the rising generation of youth with opportunities for understanding and appreciating the problems, tendencies, and contradictions of our highly complex and rapidly changing society. It can enable them to develop attitudes, tendencies, and dispositions to aid in the building of a social order that will meet new conditions.

Accordingly, knowledge, information, and skills that were the ultimate ends of education, according to the first three views of education outlined in the foregoing sections of this chapter, become instruments in the hands of the learner for developing generalizations, attitudes, and abilities for improving human relations. This view of education has been adopted as the basis of the Virginia program because it seems to hold the greatest promise for improving instruction.

A THEORY OF PROGRESS

Some of the theories of progress advanced by social thinkers hold that progress takes place, (1) inevitably, (2) by chance, (3) by cycles, and (4) by the operation of social purpose (the telic theory). The theory of progress espoused as the desirable basis for the social orientation of the new secondary school curriculum is the telic theory of progress. According to this theory, progress is possible and is realized through guiding social change by intelligent human effort and choice.

It implies social vision, foresight and insight. Its actuating principle is purpose.

Social purpose is one of the distinguishing characteristics between the human race and the animal fauna of the globe. Social purposes have been and are the unifying forces of action in all groups and all societies. Social groups invent social agencies and institutions as means of achieving social purposes. For example, government is an agency or an institution established as a means of realizing the social purpose of protecting life and property. Unlike the animal world in which the environment transforms the organism, human society through social purpose not only enables man to adjust himself to his environment, but also enables him to control and direct it. Man functioning as an individual like the animal is powerless to protect himself against the forces of nature. His survival and advancement depend upon his intelligent cooperation with the group.

This view of social progress is in accord with the view of education as the development of personality. The concept of personality as a social product does not imply that the individual is molded as clay by the social order in which he finds himself or that he is a robot tossed about upon the sea of social conflict. It holds rather that in the process of interaction with his environment the individual exerts a considerable degree of influence upon the direction of the society into which he is born. His influence is exerted in the degree that he discharges his responsibility as a member of the social group.

SOCIAL ORIENTATION OF THE SCHOOL

That the school must inevitably have a social orientation is shown by the nature of the learning process and by the history of curriculum development. The analysis of education as the development of personality in the preceding pages implies not only that the stimulus of learning and the learning process itself are essentially social, but it also implies that learning to be effective must draw its content largely from the social order in which it takes place.

Almost every change in the evolution of the American secondary school from the Latin Grammar School to the modern high school has been made "to prepare youths for the changed conditions of society and government and business."

The American public school has always had a social orientation. In every epoch of American history it has reflected both in the life of the school and in the curriculum, the ideals of the period in which it existed.

From period to period the changing ideals of American society have dictated that the school change its goal. Some of the goals thus derived have ranged from mere literacy to ability to vote intelligently, to the view that the function of education is to enable the individual to improve his station in life. More recently this goal has come to mean the pecuniary advancement of the individual. All of these goals are expressions of the extreme individualistic ideal of American life.

In the present majority practice the secondary school curriculum reflects the ideals of this individualistic and competitive society. This condition is due to the fact that present practice is based upon the *laissez faire* philosophy. This concept came to be expressed in the principle that the individual was free to advance his own personal gain without regard to the welfare of others. The conditions under which this view of democracy was acquired were radically different from those under which we live today.

It should be noted that the curriculum is determined by the social philosophy of the specific period or epoch in which it exists. Now that fundamental changes have of necessity caused our ways of living to become increasingly cooperative, a new social orientation for American secondary education is demanded if existing American ideals are to serve as guides for education.

The realization of the social purposes of our democratic society now demands that the controlling principle of promoting individual success in a competitive world must give way to one of advancing the social welfare in a highly cooperative order.

SUMMARY

The philosophy out of the analysis of the basic considerations outlined in the beginning of this chapter and adopted as a guide for the development of the new secondary school curriculum is expressed briefly in the following statements:

1. The curriculum consists of all the experiences of pupils under the influence of the school.
2. Education is the development of personality and character.
3. Progress is realized through guiding social change by intelligent human effort and choice.
4. All education has its orientation in the ideals of the culture and of the epoch in which it exists (American secondary education and its orientation in the ideals of democracy).

S. B. HALL,
State Superintendent of Public Instruction, Richmond, Virginia.

Problems Facing Young People in Urban Centers

THE most difficult problems confronting the youth in a large urban center like New York are those presented by the deficiencies of the environment in which they live. The schools are in a continuous battle with the influences of the city and the city's lack of wholesomeness. Nearly all of the troubles that youth has and that the schools have are traceable to the city and to living conditions in congested areas. Youth is ever seeking to escape from the narrowness of life in the tenement districts and the avenues of escape are few. Those that are open lead too often to delinquency.

In one of our school districts having a population of nearly a quarter of a million people, play space, except for one small park, is practically unknown. The chief concern of the local superintendent in charge is for the health and safety of his children. In other words, he cannot begin to give them the advantages of education until he has first assured himself of their health and safety.

In yet another district the supervisors find that their most baffling and ever-present problem is the under-privileged child, and by under-privileged they mean with respect to lack of opportunity for healthful recreation and limited chances for contact with life in its broader aspects.

In some communities we find moving-picture theaters opening at 9:30 or 10 o'clock in the morning. Here is one avenue of escape, but it leads almost inevitably to truancy.

Always the great barrier to the solution of our problems which are at the same time the youth's problems is the city and its shortcomings as a place in which to live and bring up children.

Home is not the same in large urban centers; it has not the reality or the holding power that it should have. It is unable to be the powerful influence for good that it ought to be.

That hour between the dark and the daylight that Longfellow called the Children's Hour and that was devoted to story telling and the companionship of parents and children is practically unknown in the city. The time is consumed in ways far less beneficial to character building, and among them is the way of the commercial radio program.

Do you find it difficult to believe that in at least one of our city schools more than 40 per cent of the children do not have the benefit of ordinary parental care at home? It is true. The children live with only one parent or with relatives or even with friends. Home guidance of the kind that more fortunate children know is practically negligible.

And so it is that our difficulties and our problems are those presented by the things that the children do not have, by their home and environmental handicaps and by the narrowness of their experience range.

We have thousands of children whose whole life is lived within the limited confines of their home neighborhood. What acquaintance they have with the rest of the world is that gained through attendance at the movies or through listening to the radio. I doubt whether many of them do much reading even of the type of books that once had so great an appeal for boys and girls. The pictures and the radio are so much more exciting, so much less effort.

It was with a great deal of interest that I read of your proposal to establish an American Film Institute, for it is indeed true that parents and even educators are as yet not fully aware of the power of the movies as an educational agency. I recall reading not many months ago that Professor Ben Wood of Columbia University found that when a questionnaire was submitted to a group of school principals in New England asking which had the greatest influence in molding the character of young children—the school, the church or the home—70 per cent of the principals crossed out all three and answered, "The movies."

The movies and the radio are the media through which many thousands of city children receive their only knowledge of life outside of the small circle in which they live. Do you also find it difficult to believe that we in the city of New York have considerable trouble in our teaching of reading because children are unfamiliar with the objects around which the stories are written? That also is true. As a man who has never been in court finds it difficult to read and understand a textbook on legal procedure, so do many hundreds of our children who have never been to the country or the seashore find it difficult to read and understand the stories in their readers.

Last year, through P.W.A. money, we were able to begin a remedial reading project in our elementary schools, which took in, in this particular project, some 300,000 children. It was surprising to find, when we went into this, that we had a great many children who could read very well. That is, they read with evident understanding, but when they were questioned we found they did not know what they were reading at all. For instance, reading about a cow, this child had never seen a cow. There was c-o-w, and he had learned the mechanics of pronouncing c-o-w and he was reading cow, but it meant nothing to him at all. Milk came out of a bottle to him.

So we made an experiment last year to see if we could not do something in the way of giving a background to these young children so that they would understand what the teachers were talking about, and we organized, in connection with our summer play schools, schools in the parks where these children were taken all day, where they had their lunch, where they learned something about trees and flowers and animals. We tested those children about six weeks after they returned to school in September and found that 90 per cent of them had improved not only in their reading but in their vocabulary and in their general intelligence.

That is the kind of thing that makes a problem in a large urban center. These children grow up without the background that you and I had, without the family background that you and I had, and in too many cases without the religious background that you and I had. Because, say what you like, and we have talked in all of our associations a great deal about character development, we received a great deal better character training when the homes took care of religious training.

These children, then, are lost before they start, unless we do something to give them a background that will make life worth something to them, that will give them outlets into which they can put their energies which are not vicious outlets.

Our latest plan of attack upon this problem of environmental handicaps is in a proposal to establish summer camps for school children in nearby State Park areas. New York State has a truly wonderful system of State Parks, some of which lie along the seacoast and others in the mountains. The transposition of school for at least part of the year from the city and the very surroundings in which our difficulties are bred to a locale amid nature may possibly be the solution. Certainly it will give to youth opportunities that the city cannot offer him.

Perhaps two or three of the questions that we propose to discuss at a forthcoming conference on truancy and delinquency will serve to throw some light on the problems facing both youth and his teachers in a large city like New York; for instance, What must we do to make parental education more general and more effective? Would you find it difficult to believe that in 69 per cent of the homes in the neighborhood of at least one of our schools a foreign language is the only language spoken? That also is true.

Here are other questions illustrative of our problem: What means can we devise to set up a recreational program that will offset the lure of misdirected commercialized recreation, games of chance, undesirable movies, gang influences and poolrooms? Since the home plays a dominant part in developing the personality of the child, what program should be set up for the rehabilitation of the home when anti-social, immoral and other destructive conditions present insurmountable obstacles?

Ours is a gigantic city and a gigantic problem—we have more than one million and a quarter children in our schools. Someone has said that we have seventy school systems welded into one. If all the children were to march before us in parade formation it would take more than five days and five nights for them to pass. Our budget this year is more than $130,-

000,000—in normal times it would be nearer $150,000,000—and yet with all we spend and with all the experience we have among 36,000 teachers and principals the city sometimes gets the better of us.

HAROLD G. CAMPBELL,
Superintendent of Schools,
New York City.

Non-Intellectual Aspects of Personality Facing Education

THE problem of personality is a very old one, but I think that there are some new aspects of it from the point of view of sociology. With regard to the concept of "personality" I want to make one comment, which is to contrast the word "personality" with the word "character." As I understand "character," it implies a differentiation of traits into good and bad. It is a moral evaluation of personality. The word "character" thus applies most satisfactorily to a stationary society, where values have been fixed for a long time, so that the community comes to know them well in detail and long experience makes possible an easy separation of the good and the bad in particulars. But in a time of considerable change when values are undergoing redefinition, and when there may be no precedents, it is difficult to lay down specific rules, so that good or bad character is more difficult to assess. The word "personality" without moral implications comes to be used relatively more than the word "character."

When one speaks of education and personality, the problem will differ according to the age of the students taught. The education which deals with little children, may properly concern itself with personality as a whole rather more than with the intellect, although I realize that one cannot in any strict sense differentiate intellect from personality. The intellect is related in varying degrees with the emotions and with the whole personality. Nevertheless, training to solve a problem in geometry is different from the type of education with which the morals and manners of Boy Scouts are developed.

For the child under five years of age, say, the main problem of education undoubtedly concerns personality rather than intellect. The situation is quite similar with children in the elementary schools; but with college students the personality has become more set and the chance of shaping it less. Teachers and executive officers of colleges and probably of high schools would probably say that their problem is with the intellect rather than the personality.

The chief personality functions of high schools and colleges have, by tradition, been to exclude those very gross influences which bring immorality and degradation in personality. That schools for young men or women will voluntarily go farther in assuming responsibility for personality I doubt. Few colleges and high schools would say, "We will assume responsibility for the personalities of our students; we guarantee to society a satisfactory personality development of the young that are trusted to our charge." It is assuming too much; they could not possibly succeed; and there is no particular reason why they should make such claims.

A superintendent of schools or a college president would reply that the training of personality is the proper function of two other social institutions rather than of the school. It is the duty of the family on the one hand and of the church on the other. The task of dealing with the personality is being forced upon the schools whether they want to accept it or not. I have discussed with various parents at different times the question of the choice of the college to which to send their sons or daughters, and I cannot remember a single case in my experience where the major force in selecting a college was not the community values bearing on personality rather than the excellence of instruction. Parents are really interested in the social environment of the college in which their children are expected to live. They appear to be more interested in the extra-curricular activities which are more effective than the classroom on personality, than they are in having mathematics, for instance, taught well.

The problem of personality is being forced on the colleges and high schools because of the botch which cities and factories of modern civilization have made of ethical and training values. The personality difficulties facing the public school children of New York City today hardly bothered the schools in the villages of a generation ago, where the home and the church were relatively stronger in their influence. The scope of the influence of the home and church over children is greatly reduced over the young in our large cities. Hence the pressure for the schools to carry the burden.

Personality was once divided primarily into the two categories of "good" and "bad." Now, as a result of the growth of psychiatry and abnormal psychology, the dichotomy is that of "normal" and "abnormal." Thus, the ideas of nervousness, of mental disorders, of strains, of peculiarities and eccentricities, all these are now considered most important aspects of personality, as truly as the traits "good" and "bad." I have always been very greatly impressed with some conclusions which I made some years ago with regard to the frequency in society of abnormal personalities. It was shown, in New York State and in Massachusetts, that of the boys and girls of high school age about one in twenty would actually be in an insane asylum some time during the course of their lives.

As a sociologist I see these issues as against the shifting of functions among our social institutions. At any one time the business of society is cared for by a certain set of institutions, government, industry, the family, the church, and the community. As time goes on, one of these institutions will lose some of its functions which will be taken up by another; for instance, the family today has lost many of its functions with regard to protecting the individual members of the family. These functions have been assumed by the state through the police and through measures of economic security such as old age pensions. A function once exercised by the family is now taken over by the state.

The family has lost to industry nearly all of its economic functions and has lost to the Government many of its social functions. In addition, about one in five or six homes in the United States is broken by divorce, and many more by separation. One in eight or nine married women is working outside of the home for a living. In many homes children are few in number, so that the training values of being brought up with brothers and sisters do not exist. Paternal authority is declining. Many members of the home spend much time outside in offices, factories, stores, on the streets, in the parks, theaters or schools. Thus, the home is clearly losing some of its contacts with the child. Therefore, it is easy to see how the home tends to lose to the school some of its functions regarding personalities.

The church is also shifting its functions. The church played a great rôle in society in the Middle Ages, where it concerned itself with the affairs of state, with matters of international relations, when it was the patron of the arts, and where education was mostly in the monasteries under the wing of the church, and where it concerned itself somewhat with the healing and medical practices, and where it dominated the details of our daily life and our conduct. By contrast the rôle which the church plays in modern life is greatly diminished. There are many young people that go to Sunday School, but I do not know how effectively they are taught, but the brief period that the churches deal in Sunday School with the youth is against a supposition that they exercise any very large influence. The shifting rôles of the church also indicate a movement to have some other institution—as for instance, the schools—assume more and more responsibility for the personality of youth.

I am not, if you please, making any comment here with reference to the significance of the church or the significance of the home. I am speaking merely of a sort of quantitative concept of the decrease of these functions. If these two great institutions are weakening or are losing the influences that play upon the personality of the child, what is to happen? Does it mean that these functions must be taken over by the schools? It is a very serious question as to how much responsibility the schools should assume for the personality of the young. Considerable rearrangement of the school activities would be involved. Larger sums of money would appear to be required. I want here only to raise the problem rather than to offer solutions. I may be permitted, however, to go into a little further detail.

What may a high school or a college do about personality if the assumption of responsibility is unavoidable? This is a very modest and negative way of putting it. There are four or five approaches that might be looked into. The first thought that comes to mind would be the adoption by schools and colleges of a psychiatric service. Many colleges today have a health officer who deals with mental problems, and in one or two universities the service has been developed quite far. There are also a number of schools that deal with very little children where this psychiatric service is quite highly developed. I imagine that the mental problems of the youth will be such that these schools, certainly the colleges, will have some kind of service of this kind.

It is apparent, however, that such a psychiatric service is not in any way applicable or comparable to the service of, let us say, a dentist or a physician who treats diseases of a physical sort. At best, psychiatrists can only be mildly helpful in most cases. The problem of psychiatry is really a problem of social institutions, a problem of social life, I should say, rather than a problem of medicine. I do not think, therefore, that very much is to be expected from the use of health offices in developing personality.

The next suggestion is the greater use of extra-curricular activities, that is to say, activities of the school outside of the classroom. These community values center ordinarily around the fraternities, athletics, the various clubs, the religious organizations in the college or in the high school. Extra-curricular organizations are a better ground for dealing with personality than the classroom. The faculty in a high school or a college ordinarily does not appreciate the value of extra-curricular activities as compared with the courses of study. Usually the executive officers, the deans and the presidents, have more understanding of it, but I doubt whether the whole subject of this community life of students has been considered sufficiently as an opportunity for dealing with the personality.

With regard to the curriculum I question whether the teaching of courses in ethics or even courses in college problems will be very effective in developing personality. They are undoubtedly of value, but surely the reading about ethics in books is a poor substitute as a pedagogical device for dealing with the whole question of personality. It would seem to fall far short pedagogically to the employment of group projects.

One other part of the curriculum may be mentioned, namely art and esthetics. The value of art as a sublimating agency is supposedly quite great. The schools will push forward along this line, I predict; and success will have some effect on the personality.

The last point deals with the social sciences. The suggestion is that social sciences might serve as something of a social religion. Religion has probably been the greatest single force outside the family in cultural history in shaping the personality and keeping the personality in more or less normal channels. The decline of religion and its influences over human beings is one of the major forces responsible for this crisis in personality. Young people, indeed nearly all individuals, want some force to be loyal to, want something higher with which to identify themselves. Religion was wonderful for persons with paranoiac tendencies. The dementia praecox types often found a very satisfactory adjustment for their loneliness in religion. Supernaturalism offered many outlets for the manic-depressive deviations.

Some young people, trained in the social sciences on a purely scientific basis to regard facts as the sole criteria and science as the goal, come out with an excellent ability to think on social problems that is very useful, but the effect on their personalities is oftentimes not very satisfactory. I have seen young people with such a scientific training in the social sciences come out with a cynicism, a detachment, sophistication, with a lack of purpose, that approaches almost the abnormal. A purpose is very effective in integrating the scattering tendencies in our personality. The whole personality is not satisfied by the scientific criteria. The devotion to communism, to fascism, or to nationalism wrecks, at times, any attempt to base conclusions on evidence. The emotion of religion is more powerful on personality than the love of facts. I doubt whether the world realizes the inadequacies with which social science education based upon the facts meets the question of personality. The problem of teaching social science from the scientific point of view is not great, and is what most social science teachers want to do. It is hard for me to realize how a teacher, as a social scientist, would want to do otherwise than teach social science from the point of view of science. I can also see why a college president, a dean, or parents might be interested in having social science taught with some other purpose than science, such as the social worker or the nationalist has. Such a method is very helpful to the distracted personality.

The colleges and high schools of the United States will see this problem much more acute in the future than it is now. You have seen the handwriting on the wall when you witness the conflict between the Fascists and the Roman Catholic Church in Italy over the training of youth. You see an indication of what is to come when you notice the zealousness with which the Russians guard the teaching of their youth from the point of view of communism, and the concern with which the Nazis in Germany are interested in inculcating their doctrine in the youth.

The indoctrination of such a social religion in youth takes because the scientific instruction in the social sciences, however excellent it may be for the thinking processes, and for science, is most inadequate in meeting the needs of personality which a social religion does much better. As a teacher of social science I should be very much interested in seeing religious fervor in another field than social science. I should be very much interested if courses in art, or if extra-curricula activities could meet this need of the personality, so that we might be left free to deal with social science scientifically. But I fear some kind of social religion will soon be on us. The reason will be because the personality needs it.

I close without any program, but if educators are looking for unoccupied areas or for new worlds to conquer, tackling the problem of personality will give them plenty to do for a long time to come, a task worthy of the ablest genius of mankind.

WILLIAM F. OGBURN,
University of Chicago.

A Program for the Office of Education

I AM VERY glad indeed to have the opportunity to say on this occasion that I welcome the chance to speak to this group led by my predecessor with whom I have for many years had very pleasant relations. He has been most helpful to me since the time of my induction into this office last October.

I accepted this position with some reluctance because of the interesting laboratory in which I was at work, partly, because I had looked over the record of the tenure of previous Commissioners of Education. I witnessed in the record the fact that Dr. Claxton was Commissioner of Education thirteen years. Dr. Cooper followed him with a four-year term, and then Dr. Zook with one year. Having been trained somewhat in statistical representation of trends, I visualized a graph running down this way and I wondered if it might have any significant bearing upon my situation. If it has I ought to be through now, because I have been here six months. But I have found it all most interesting, however, this work at the educational vortex of the swirl of political, economic and social situations.

I don't find it possible to have the complacency that some of the sociologists present this morning appear to possess with respect to the future of American life. Witnessing the passing events as I do, it seems to me that we must get ourselves into action. We can't constantly engage in research, suspending our judgment indefinitely hoping that sometime something may appear to us that will be practical.

I have found a very interesting personnel in the Office of Education, some 175 people altogether. They have been very kind to me. I think they have been far more useful to American education than some of us in the field have realized. The personnel in general is divided into two divisions, the general education division and the vocational education division.

This general education division carries on a great deal of research, publishes some thirty publications each year, drawing in the best experience that can be found throughout the country, typifying, I think, the very essence of our concept of this process called education, a process which accelerates the sharing of experiences over wide areas, assembling them in convenient form and redistributing them, making them available to the whole country. We are constantly being asked to make surveys of school systems. We are just completing one in Cincinnati. We have been asked to work out plans by which a better organization for education may be put into operation in Alaska, where there are two school systems now, the one for the natives and the other school system for the other children. With the mixing of bloods there, there are constant problems arising which need solution.

A good deal of work has been done by our office in the last year, particularly on the radio. Our Mr. Boutwell has been conducting a period each week, as you know, called "Education in the News." Dr. Koon has been making his contributions to the way in which education may be advanced through the instrumentality of radio.

The second large function of the office is vocational education. That involves many, many problems, especially in these emergency days, when under the Federal Emergency Relief Administration, a very extensive program of adult education is in operation, running over into the vocational fields, and employing teachers on relief at relatively low salaries. On the other hand, there is the extension division of the Department of Agriculture, augmented by the staff of the AAA, with the purpose of offering education to farmers regarding our modern intricate problems of agriculture.

There are, therefore, three attempts being made by the Federal Government to teach people agriculture; the division of vocational agriculture in the Office of Education, FERA, and the AAA in the Department of Agriculture. I can't take time now to go into all of the implications of those separate ventures in this one field. I think some of you are familiar with the problems involved. It is interesting to me from the standpoint of administration, and suggests an excellent opportunity to develop much more carefully coordinated plans for the administration of education in the nation under the influence of the Federal Government.

May I mention the adult education program, and the nursery school program in which Mrs. Roosevelt has played an important part. There are about 40,000 unemployed teachers engaged in these two programs. Then there is the student aid program. You know about that because many of you are directly interested in it. One hundred thousand students are attending college this year, by virtue of the fact that the Federal Government has extended financial assistance to them for work done. Then the problem has arisen of keeping some of the elementary schools, largely rural, operating. Last year the Federal Government spent $14,500,000 on that program alone. This year I would estimate that the amount will run to about twelve or thirteen million dollars by the time the school year has closed.

You know something of the participation of the Office of Education in the educational work in the CCC camps. That is a great adventure in the education of youth—you have been talking about youth this morning. It is an adventure which is of tremendous importance and has great promise. The Office of Education is directing the educational activities in the camps. The budget for the next fifteen months for CCC camp education will be something in the neighborhood of six or eight million dollars. You know that Dr. C. S. Marsh, who has just recently become the Associate Director of this Council, has been in the Office of Education handling the educational work in these camps.

I would make a guess that it will be a long time before the CCC camp idea will be completely abandoned, if ever. I think it offers an opportunity for a kind of secondary school, or even elementary school work for certain types of boys, which cannot be provided in the cities and the small villages. We all know there must be some good reason why only 50 per cent of the young people of the United States today of secondary school age are in high school. We haven't solved the problem of American education for young people when we bungle our processes to such an extent that so many of our young people dislike school so much that they drop out before finishing. Then we promptly forget that they have done so. Too often we have felt rather relieved that they withdrew, even though they had nothing constructive to do.

Now if American education is going to be as effective as has been suggested here from the standpoint of the sociologist and implied very many times by Dr. Campbell, as an agency which actually inducts young people into our society, our mature society, and gets them adjusted to some satisfactory niches in life, then I think we must look squarely at the fact that only 50 per cent of our adolescent young people are even in our high schools today.

I have thought that the camps may some day develop into a great American folk school or a grandiose Antioch scheme. Something of the kind is in the future. We have had about 300,000 boys in the camps. The number is to be increased to 600,000. What the permanent program will be no one can tell, but it is filling a very, very important gap in the lives of these boys now. The Office of Education is involved and feels very much responsible for the success of those boys during this interlude between their ramblings around in the communities before they go to camp and the time afterward when they come back home to be assimilated into their respective societies.

I think there is a great chance for improvement in the educational techniques and programs of these camps. If you have heard any criticism of the problem there, bear this in mind, that the camp presents a much more difficult educational problem than any school administrator in this room has. Each camp enrolls a much more heterogeneous group viewed from many angles. Many of the camps include boys who have not gone to school at all, some who have graduated from college, and all the levels of educational attainment in between. That presents a real problem that can't be dodged.

We have been holding innumerable conferences during the past year under a grant of money provided by a foundation. They have been conferences which will eventuate in some definite proposals for consideration of the educational world. I won't take time to discuss those. They are quite varied. One is being held today and tomorrow at our office on the general subject of comparative education, dealing with the whole question of nationalism. There are some 700 professors in colleges in this country engaged in the teaching of courses which might be classified under this general heading of comparative education. We see in many States laws being passed under the heading of oaths of allegiance to which many strings are being tied which have an important bearing on this whole question of comparative education.

A man said to me some time ago in relation to one of the publications put out by the Office of Education, "Why do we need to know anything about education in Belgium? Belgium ought to learn from us; we haven't anything to learn from Belgium." You can catch some of the implications of that query. I want to suggest to you that when you come together here again a year from now you are going to be discussing under the heading of unoccupied areas, perhaps, an area in education occupied by some of these outside influences that would create a bitter nationalistic feeling throughout the nation. And I believe education has a vital part to play in that whole program. That's why we have called this conference. The conference will not end with talk. The members of the group represent the whole field and sooner or later some publication will go out to you to give you suggestions concerning the findings of the conference.

Now I want to speak just for a few minutes about some proposals in which we think the Office of Education is involved. Mrs. Roosevelt has referred to the splendid venture of this Council into the field of research concerning youth. I am very happy that the Council has secured the funds with which to go ahead with that project. But I am sure it is clear to you that we can't wait too long for the results of research before some practical action is taken with respect to millions of our young people. That is evidenced in the camp organization itself. We think that in addition to the camps and the student aid program which touches a relatively small number of our youth, there should be developed an adaptation of the student aid program and to a certain extent the camp project in the local communities where millions of stranded young people live. As nearly as we can estimate, out of the 22,000,000 young people in this country between the ages of sixteen and twenty-five there are at least three million who are out of school, out of work, and who are still living at home and are in desperate straits financially.

Now if there ever was a crime breeding setting that is it. The morale of these young people is broken, they are in a state of constant susceptibility to the forces which disintegrate character. If they ever had any employability acquired through education it is being lost through disuse. They are tempted to go into all sorts of rackets. Here we see in our great nation over which these millions of young people are distributed, our youth, once filled with high hopes, meeting a hostile world.

As I recall what Dr. Campbell said so well in his preliminary address, I remember what I see when I go to New York City in the summer. There I have seen thousands of youngsters digging their toes down into the sand if they can find a vacant lot upon which there has been excavation. There they are, called by their very natures, wanting to get next to Mother Earth. I say to myself that the urban centers like New York and all the other great cities of the United States have much to do in this field of education of youth.

I am not very enthusiastic, personally, about a system of doles. I haven't found anybody in the Federal Government who is. I am sure that the President isn't, but, as Grover Cleveland said many years ago, "We face a condition and not a theory." It is certainly wise to venture even to the point of danger with our financial structure if necessary in order to save our people and to save our social order.

Therefore, I think that funds should be made available to be distributed to the country in general under a plan, as I said before, adapted from that of the student aid program, which will put money into the pockets of a small percentage of these young people who are forced to remain in their respective communities, for work done there. The local school systems which have dealt with these youth should take them in charge and lay out for about 10 per cent of the young people between sixteen and twenty-five years of age, a wholesome program which will occupy their time forty-two hours a week in work, recreation and study. I think this is a glorious opportunity, which meets a great need among our young people. We must jolt the American public school system to such an extent that it will realize its obligation to invent ways and means of becoming more effective in its education of youth, so that 50 per cent of them will not regularly desert this great institution which is supposed to be the bulwark of American democracy.

I spoke of the camps. I would make the guess that there is enough genius in New York City under the guidance of your staff, Dr. Campbell, related as you are to all the agencies in New York City dealing with youth, to find ways by which you can put youth to work developing camps for themselves for future years to which they may go in the summer by the hundreds of thousands. It has been done in Europe. Poor old Austria did it. If Austria can do it we can do it, and we can find ways of getting our young people out of these centers of population, out into the open country in the summertime, where they can realize what God has really provided for us.

I have merely sketched the youth program. I detailed it in a radio talk the other night. That talk is available at the office. We ask for comments, questions and suggestions. Send them in. It isn't a rigid, fixed, final affair. If it is done well it will be done by the local groups operating together, all agencies, private and public, involved in the care of youth.

Now I have just two or three other things to mention and I will do it very quickly. In putting a large number of whitecollar workers to work I think the Federal Government should invest about $900,000 in the next two years in making a thorough-going school plant survey of the whole country, at least, wherever school plant surveys are needed. There isn't any question about the fact that we have the most cumbersome, archaic, administrative system for the management of education that the world has ever known. We have 128,000 independent taxing units for the support of public education in the United States. That's provincialism with a vengeance. In my own State of Iowa we have 5,000 school districts, independent taxing units. We have more school board members and school officials than we have school teachers. Did you ever know any successful business that had more people on the board of directors than it had on the staff of employees? We are school-teacher-poor in Iowa. We have too many school buildings and yet we don't have enough school space. Why should the Federal Government spend perhaps $300,000,000 on school buildings, without underpinning that whole construction program with a survey to determine, through reorganization of their administrative units where these schools ought to be located?

We have constant demands in our office for that sort of thing. We are asked to go out here, there and yonder to make surveys. We aren't equipped to do it, but I see an opportunity here to erect a supervisory organization to put about 4,000 white-collars to work gathering the data. Stranded, thwarted youth can be put to work. Wouldn't it be quite appropriate to put youth to work in making a survey of the schools for youth? I think it would be.

Now one final word. Much has been said here today about the social studies. Some skepticism has been indicated about the efficacy of the social studies to solve our problems. When you look out over this country and realize the gross ignorance of 75,000,000 adults over twenty-one years of age with respect to our National Government, when you realize that 64,000,000 out of the 75,000,000 have not completed the high school, that 32,000,000 out of the 75,000,000 have not completed the eighth grade of the common school, you realize that we have not built a sound foundation in education. We boast about our wonderful public-school system in the United States on the Fourth of July when we develop a little patriotic fervor, but the facts don't prove that we have a real foundation in education in terms of years of schooling, to say nothing of the quality of it.

We are trying to run a democracy. Personally, I feel that the most novel thing we can all do now is to dramatize the virtues of this great concept of democracy for which millions of men have fought and died down through the centuries, and to work for the preservation of our parliamentary system of government, for free speech, and for a free press.

We won't make democracy work, in my opinion, unless we use our American genius of organization to provide a plan by which adults may be gathered together in thousands of groups all over the United States in their respective communities, under competent leadership, to study the problem of associated living in a democracy. We have the machinery for it. We say in effect that we are going to take our young people along in the elementary and secondary schools in which we shall give them the foundation, and then the newspapers and the radio and the political parties and the vested interests will do the rest. Now we don't say that for some of us, we don't say that for the few who go to college. I have taken the strongest cue that I have ever had with respect to the need for a comprehensive system of adult civic education from what I have found college and university graduates think they don't know about how to make democracy work. If they think they don't know just how to do it, what of these 64,000,000 people who didn't finish high school, or the 32,000,000 who didn't finish the eighth grade of the common school? I believe if there is any justification for a comprehensive system which brings together groups of people at the age of seventeen or eighteen for the purpose of discussing day after day our social problems under the name of education, there is the same justification for not smashing that machine at the point in the lives of these young people when they can be expected to comprehend those problems. If they did have all the knowledge they need at eighteen, five years later that knowledge would be out of date. Did you study when you went to school in your classes in economics an NRA? Did you study the AAA? Did you study many of these problems that we are facing today? No, you didn't. Why smash the machine before it has done its work? If there is any justification for the machine at the age of eighteen there is certainly ample evidence that there is need for it to operate throughout adult life.

America can afford to put into the field in the next ten years enough capable men and women to lead discussion groups of adults in all the small communities and in the localities of every large city who gather there to consider their great national problems. We can afford that. Now I doubt—and I realize at this point I come to very dangerous territory—whether that program will be advanced rapidly enough to save our democracy without Federal financial stimulation.

I think there are two things we must quit talking about. One is absolute Federal control of everything local. Government always governs, whether it is Federal or local or State. If we are going to be intelligent about governing ourselves we have to do this kind of thing in order to determine the most crucial issue of all, and that is the extent to which we are willing to be governed by Federal authorities or State authorities or even city authorities. I will venture the guess that Dr. Campbell has had the experience many times of determining just how far a local school officer should govern a local school in the city of New York.

The great problem that I see in democracy is this: to keep our wits sharp enough, all of us, millions of us, all the time, to preserve a well balanced degree of government by Federal Government, State government and all the other governments. W can't do that unless we understand our problems. I for one believe that unless we bolster up our system of education in the adult field by some such process as I have outlined, safeguarding in the law control of the selection of forum leaders and the choice of subjects to be discussed, safeguarding that in the law to the local communities—unless we do something like that we are going to see, slowly, these disintegrating forces at work until we shall acquire dictatorship by default.

JOHN W. STUDEBAKER,
U. S. Commissioner of Education.

The Motion Picture in Education

THE history of printing is sixteen times as old as the history of motion pictures. The first book was printed in 1455; the first motion picture was sold in 1906. But in thirty years the motion picture has reached a wider audience than print. Learning from books is a human achievement; learning from movies is a natural gift. There are millions of illiterates swarming the hemispheres who cannot read books; there is none except the blind who cannot read the movies. The audience of print and radio is limited by language. The audience of the motion picture is global and has no boundaries. The range of influence of the motion picture is broad in time from childhood to death and in place from continent to continent.

While its range is universal, its efficiency is also startling. Here is a teaching device in which the adult learner can pass a 95 per cent examination on the facts presented in a picture and the eight-year old child learns half as much as the adult. When the universal range of the motion picture is multiplied by its high effectiveness as a teaching instrument, one's imagination is expanded to the limit of its tensile strength.

However, actualities seldom reach potentialities and so in this case it is desirable for practical men to consider the practical possibilities of this new medium of instruction to discover what may reasonably be expected to be its normal contributions within the next ten or twenty years.

First, we may examine data about the influence of the motion picture as an educational instrument. Here we are fortunate in having at hand the results of the Payne Fund Studies of the effect of motion pictures upon children and youth. Stoddard and Holladay have shown that facts are taught with high efficiency by the movie. Children of eight years of age can pass a good factual examination upon a picture they have seen only once even when it is a commercial recreational film and not a specially prepared teaching film. It is a superior tool for teaching facts.

Indeed, in reviewing the data of Stoddard and Holladay the teacher is driven to the conclusion that the commercial movie must be included as part of the curriculum of childhood. Educators realize that the total of the child's curriculum—the experiences which he traverses and the ideals he appropriates —is furnished in heavy proportions by the home. They have not so clearly recognized that the motion pictures which children attend once a week and think about every day provide a very intense and powerful portion of the total curriculum by which children are affected. Administrators who survey the complete round of the influences of childhood must not be indifferent to the commercial movies and ignore them. Schoolmen have as much need for surveying the content and ideals of the commercial movies as they have of surveying the homes and the social communities of children.

The power of the motion picture, as compared with the power of the radio as a media for distributing or teaching facts, is an interesting question upon which to speculate. Such data as we have seem to indicate that facts are better learned from print than from the broadcast. When one group of children reads a script and another equal group listens to the broadcast, a few studies indicate that the readers learn 25 per cent more than the listeners. Print is probably superior by and large to the radio as an efficient tool for imparting information. The movie is probably superior to print. Although no specific studies bear upon this point it is my judgment that superiority is indicated. Consequently it is reasonable to assume that the motion picture is superior to the radio, unit by unit of materials presented. If certain facts are to be presented the teacher may expect that it is more efficient to present them by way of a motion picture.

However, for quick mass education the radio is probably superior to the movie or to print because it is easier to get a nation before the radio receiver than before a movie or before newspapers, bulletins and books. If President Roosevelt wishes to communicate with the 120 million people in the nation, he will with an equal amount of publicity reach more people and exert a broader national influence by radio than by pictures or print. What the radio lacks in unit efficiency it compensates for in wider instantaneous range.

In the orderly procedures of the school and classroom, however, where it is possible to get all the children before the receiver, the movie or the book, the movie in my judgment is superior to the radio or the book in imparting knowledge. Yet the book can not quickly nor eventually be supplanted by the movie because the book possesses superiority of flexibility and range. There is much significant information in textbooks which has not yet been produced in films and it does not seem practical within the next two decades to film all the information in texts. For review purposes print has the advantage because it is easier for a child to take a book from his desk than to secure a review of a film. For reference work the book is more flexible because more readily secured and more easily skimmed.

It would seem, therefore, that as a fact-conveying instrument the movie will not monopolize the school. It will rather settle into a position among other tools of instruction—books, classroom discussion, pupil activities, radio and so on—a position of great importance however beyond the imagination of the typical classroom teacher at the present time, yet a position that will be determined by its value in competition with other tools. In short, the movie is one more instrument of great promise now being added to the instructional equipment of the teacher.

We have been speaking of the efficiency of the movies in imparting facts. Their influence on attitudes is worth a comment. Thurstone and Peterson showed the startling effects of some pictures in this field. For instance the central attitude of a high school population was shifted by showing one picture favorable to the Chinese, from indifference to substantial and friendly liking. Another picture changed another high school population from a slightly negative central attitude toward the negro to a distinctly unfavorable attitude.

These results were produced by a single exposure to one picture. Not all pictures produce a result so powerful but Thurstone and Peterson showed that the effect of pictures upon children is cumulative. One picture may not produce measurable changes but two pictures and three pictures of the same kind have produced measurable results. One may assume that if enough pictures depicting respect for law are shown children, eventually substantial changes in attitude will be achieved. Or if enough pictures glorifying a life of crime are presented, children will in the end come to regard criminal careers as patterns of behavior to be admired. Moreover, these changes in attitude have permanency. In only one case had the high schools studied by Thurstone and Peterson returned to their pre-movie experience in two, six, nine and eighteen months.

The educational implications of the attitude changing efficiency of the movies are compelling. People interested in developing in children and adults such attitudes as love of country, international good will, pacifism, nationalism, old age security, honesty, industry, ambition, rugged individualism—attitudes toward anything—have in the movies an instrument of peculiar potency. In social hands they are powerful and beneficent; in anti-social hands they are powerful and dangerous. In changing social attitudes the motion picture is dynamic.

Two of several varieties of influence have been discussed—fact learning and attitude change—other influences could be added but enough has been said to validate the position that the motion picture is a powerful instrument of education.

The limitations of the motion picture as an everyday and intimate instrument of education that have been recognized, are the following: First, the motion picture belongs to the textbook-lecture type of instrument. It is a superior textbook, but it is a textbook. It is a superior lecture, but it is still a lecture. It cannot easily discuss nor carry on pupil activities. If children's education were carried on entirely in an ideal movie theater, it would obviously have defects.

Second, it is difficult to fit films into the curriculum—to get the right film at exactly the right time. Many of these difficulties will disappear in time as more films are available in the national market and more are purchased for the school and classroom library. Ideally a teacher may be supplied with every film he needs but practically in the next two decades this will not be achieved—either the production of all needed films nor their purchase by the schools.

Third, with individualized education growing in acceptance and the needs of individual children being increasingly recognized the film is not so appropriate because its most economical use from the pedagogical point of view is with classes rather than individuals. To arrange for each child to see a film as and when he needs it is an almost insurmountable difficulty.

Fourth, films are difficult to use for reviews. The value of the movie in initial learning is recognized. Where repetition is necessary in learning its value has not been fully demonstrated and in many areas of learning repetition is essential. In history, for instance, the first showing is satisfactory; but a second showing may not be easy to arrange and may not be valuable because of possible lack of interest.

Fifth, unless pictures are dramatic and interesting enough to grip and hold attention they are not likely to be particularly efficient. Stoddard and Holladay and Blumer noted with emphasis the factor of emotional possession in commercial pictures. Children learned in superior fashion from pictures because they devoured the picture—watched with all their mental powers alertly focussed upon the film. It is in my judgment entirely likely that if the picture dealt with subjects which did not grip attention they would have slight influence upon learning.

Such is the criticism that is made on commercial producers about the teaching films. They claim that films must be dramatic. Yet contrariwise teaching films must be teaching films and not merely dramatic films. When the classroom teacher makes films in the studio he is competent to build instructional films. That is, he will analyze the difficulties of children in learning. He will know where to add footage, where to pause, and where to repeat. But he may lack the ability to dramatize his picturage and to hold the attention of his audience. The commercial producer can contribute the drama but he will be an amateur in handling the teaching problems.

Consequently in the next decade when teaching films will be more widely studied they will be produced by a staff composed of both teachers and movie dramatists as has been done by the companies who are developing teaching films in a large way for sale. Eventually, however, men with both experience in teaching and expertness in movie drama will be developed.

The limitation of dramatic content will be very real and very constant as the schools become more powerful in specifying and producing educational films. We shall undoubtedly use many educational films as deadly dull and lacking in interest as are the typical textbooks in use in elementary and secondary schools.

The areas in which the motion picture may be used are numerous. In art, obviously, they will be at home especially when color photography is in universal use, as it will be very shortly. Art schools now are using them for a variety of purposes. One in the Rochester Mechanics Institute uses them for composition classes chiefly to help the students to master action and portray it in their drawings. Another at Ohio State University makes its films and uses them for a variety of purposes.

Drama, of course, is greatly assisted in presentation to supplement the dramatic text. Historical events have been portrayed and the range of historical subjects susceptible to movie treatment is limited only by the expense of production. The record of customs of communities, the games, labors and homes of people are widely used in Europe in the so-called documentary film. In manufacturing, the operations of machines and people have been filmed and are used in classrooms. The head of a department of electrical engineering informs me that movies are superior to field trips because films can, by picture and cartoon, show what goes on inside machines while on field trips only the outside of many complicated machines can be seen. High power football coaches use films in slow motion to spot defects in practice and show superior ways of curing them. In the biological sciences hundreds of films have been made to show the phenomena of living things. An Italian film which I saw last year showed most graphically in a film an hour long the development of the chick from the germ. The producer used the simple technique of photographing the egg every fifteen minutes or so and thereby shortened the sequence from the natural period to some 60 minutes. The life processes and actions of plants and animals are capable of portrayal by patient photographers in the air, on the ground, and in the sea. It can be said without fear of contradiction that the film is without equal as a means of understanding and comprehending biological life.

In the physical sciences, particularly by the use of cartoon drawings, the possibilities of the film are enormous. Films portray the revolution of the earth around the sun, of the planets, the causes of tides, atomic action, gravitation—any physical concept is capable of some clarification by the use of cartoons or pictures. Surgery, veterinary medicine, and dentistry are examples of professions which use the film to demonstrate delicate, unusual or routine operations. As a teaching device in surgery, the film is superior to a demonstration because the film can be placed in the optimum positions to record what occurs and in a theater each student sees from this favored position while in the operating amphitheater he may be too far away or in a position too unfavorable to see. The area of use of the film in education is therefore universal.

The problems to be met in the next decade and solved in expanding the use of motion pictures in education in America may be classified as lying in the fields of production and distribution.

In the field of production there is a large but scattered supply of films that might be used by teachers. Two major organizations have produced teaching films in substantial numbers—Eastman Kodak Company with its subsidiary Teaching Films, Inc., and Western Electric with its Erpi subsidiary. Numerous smaller companies are producing classroom films. The so-called commercial producers have not been interested in the teaching field even though their recreational pictures in the movie theaters have a profound educational influence upon children. Manufacturers have produced a very large number of films of processes chiefly for advertising but useful as teaching materials. Records of significant phenomena have been made by scientific bodies, as eclipses, by astronomers. Particularly important are the 16 mm. films made by teachers for use in their own classes. These amateur producers are a very important source of local films for personal use. Indeed one is surprised at the number of films produced by them that one casually stumbles upon.

There are thousands of films in the United States which are potential materials of instruction even though no concerted attempt has been made to produce them except by the few companies in the commercial field of teaching films.

Education now clearly has the obligation in the field of production of surveying the supply and the demand for teaching films and stimulating production by appropriate agencies to fill the gaps and meet demand.

In the field of distribution the problems are more immediate and pressing. As indicated there are hundreds of films in the country of greater or less efficiency which are now in use in the schools. But there are thousands which might be used if the schools could learn about them.

There is, therefore, a place in the United States for an agency which would not produce films but would locate films which are available for use and devise a method of locating new films as they appear. This agency could then classify these films according to all the forms that would be useful. For instance, they could be classified by age of pupils: useful for primary, intermediate, junior high, senior high school pupils, for beginning courses and for specialized courses in colleges and universities. They could also be classified by subjects as geography, art, history, or biology. They could be annotated for content and even evaluated for quality. Such collecting and classification is urgently needed at the present time.

To supplement this national activity a plan of distribution of this information is clearly indicated by the use of branches, or of motion picture departments in state departments of education in large cities or the use of any agency that proves best in a flexibly organized system of distribution.

With these and other considerations in mind it is apparent to me that we now should set up in this country the American Film Institute, in which the American Council on Education is now actively interested.

The motion picture has unrecognized potentialities for educational and cultural use. We in America have not learned this fact as fully as the nations of Europe. We have allowed the motion picture to develop without serious thought of its importance. With national initiative thousands of pictures have been developed. The schools, like the nation, have not grasped the social and educational significance of pictures and they have not used them as much as they should because they do not know where to get them nor realize how important they are. The American Film Institute can make a major contribution by performing the functions of stimulating interest, encouraging production, assisting distribution and measuring the effectiveness of educational films.

W. W. CHARTERS,
Director, Bureau of Educational Research,
Ohio State University, Columbus, Ohio.

A New Basis for the Accreditment of Higher Institutions

A YEAR ago the North Central Association of Colleges and Secondary Schools, which includes twenty states in the Middle West, made a complete change in its bases for the accreditment of higher institutions. This was not done on the spur of the moment but only after several years of careful investigation of the relationship between certain objective characteristics and estimates and measures of institutional merit. That inquiry was stimulated by certain studies that had previously been made which seemed to indicate that certain of the standards in use were not so reliable indexes of institutional merit as they were presumed to be at the time they were adopted. The results of these studies, together with certain other evidence accumulated over a period of years, had resulted in a loss of confidence in the existing standards and steps were taken five years ago to secure financial assistance from the General Education Board for the purpose of making a careful inquiry into the whole question of accreditment. A committee, representative of the North Central Association and known as the Committee on Revision of Standards, was appointed. A grant of $110,000 was obtained from the General Education Board on condition that the Association would contribute $25,000 from its own funds. These resources were placed at the disposal of the Committee on Revision of Standards, and that body chose a subcommittee which was placed in immediate charge of the study. This group made an intensive study of fifty-seven colleges and universities.

As originally drawn, the plans called for the completion of the inquiry in a five-year period, but at the end of four years the study was far enough advanced so that the Committee on Revision of Standards felt justified in recommending the adoption of a new policy for future accreditment. The program recommended was adopted at the annual meeting held in April, 1934; and this past year, for the first time, all institutions newly seeking membership in the Association have been dealt with under the new program.

The completed report of the Committee on Revision of Standards will consist of three parts:

1. *A Statement of Policy,* the term used in place of the term Standards of the old program. This Statement of Policy is a concise presentation of the new criteria by which the work of an institution will be evaluated.

2. *A Manual of Accrediting Procedures.* This document consists of about 150 pages devoted to the explication of the Statement of Policy. It is one of the best, if not the best, documents that has been prepared in recent years dealing with the problems of college education and administration. Supplementary to the Manual are some eighty schedules that are to be filled out by the institution before the survey is made. In addition, there is a set of score cards which are placed in the hands of the inspectors when they visit an institution. These score cards are supplementary to the schedules. The score cards are made necessary by the fact that a visit of the institutions must be made in order to secure certain types of information that are needed in deciding as to whether or not an institution should be accredited.

3. *A Series of Monographs.* Eventually there will be a series of several monographs which will contain a statement of the philosophy of accreditment and the scientific bases for the criteria that have been included in the Statement of Policy and the Manual of Accrediting Procedures.

The Statement of Policy is now in printed form, the Manual is in mimeographed form but probably will be printed within a year, and the monographs are in preparation with varying degrees of completeness. Two or three are ready to go to the printer, but it will probably be several months before all of them will be available in printed form.

With this background, the discussion from this point will be devoted to contrasting as completely as possible the new procedures used in the accrediting process with those that were formerly used. The main points of difference are:

1. A striking difference exists between the criteria of the Statement of Policy and the old standards in the emphasis that the latter place upon the quantitative aspects in defining a good institution of higher education. Three illustrations will help to make clear that difference.

a. Admission of Students

Standard: "The college shall require for admission at least fifteen units of secondary work as defined by this Association, or the equivalent. These units must represent work done in a secondary school approved by a recognized accrediting agency or evidenced by the result of examinations. The major portion of the units accepted for admission should be definitely correlated with the curriculum to which the student is admitted."

Policy: "The policy of an institution in admitting students should be determined on the one hand by the purposes of the institution and on the other by the abilities, interests, and previous preparation of applicants. An institution should admit only those students whose educational interests are in harmony with the purposes of the institution and whose abilities and previous preparation qualify them to pursue the studies to which they are admitted."

b. Library

Standard: "The college shall have a live, well-distributed, professionally administered library of at least 8,000 volumes exclusive of public documents, bearing specifically upon the subjects taught and with a definite annual appropriation for the purchase of new books and current periodicals. It is urged that such appropriation be at least five dollars per student registered."

Policy: "The library should provide the reading facilities needed to make the educational program effective, and there should be evidence that such facilities are appropriately used."

c. Finance

Standard: "The college, if a corporate institution shall have a minimum annual income of $50,000 for its educational program, one-half of which shall be from sources other than payments by students, and an additional annual income of $5,000, one-half of which shall be from sources other than payments by students, for each 100 students above 200. Such college, if not tax supported, shall possess a productive endowment of $500,000 and an additional endowment of $50,000 for each additional 100 students above 200. Income from permanent and officially authorized educational appropriations of churches and church boards or duly recognized corporations or associations shall be credited to the extent actually received as 5 per cent income toward the endowment requirement, but to an amount not exceeding the average annual income from such appropriation in the preceding five years, provided, however, that this shall not apply to more than the amount required in excess of $300,000; and provided, further, that colleges electing to qualify under this interpretation be subject to annual review for accrediting."

Policy: "The institution should provide evidence of financial resources adequate for and effectively applied to the support of its educational program."

It should not be inferred from these contrasts that the use of quantitative data has been eliminated from the new accrediting procedures. This would be far from the truth. On the schedules and score cards a much larger body of objective evidence is obtained than was true under the old program. The chief difference in this respect resides in the fact that the old standards were more or less automatically applied, whereas the purpose of the data collected on the numerous schedules and score cards is to serve as the bases of judgment regarding the accreditment of any given institution.

2. The Statement of Policy makes provision for a large measure of institutional individuality as contrasted with the conformity to the liberal arts type that was more or less dominant in the standards. The attitude of the Association on this question is indicated by the following quotation from the Statement of Policy:

"In its accrediting procedures the Association intends, within the general patterns of higher education, to observe such principles as will preserve whatever desirable individual qualities member institutions may have. While it is necessary to emphasize certain characteristics that are recognized as basic, such as the competence of the faculty, the representative character of the curriculum, effective administration, standards of student accomplishment, and financial adequacy, it is regarded as of prime importance also to protect such institutional variations as appear to be educationally sound. Even in these basic matters it is clear that considerable divergence from average or optimum conditions may occur without perceptibly detracting from the essential educational worth of an institution. Uniformity in every detail of institutional policies and practices is believed to be not only unnecessary, but undesirable. Well conceived experiments aimed to improve educational processes are considered essential to the growth of higher institutions and will be encouraged.

"Every institution that applies for accreditment will offer a definition of its purposes that will include the following items:

"1. A statement of its objectives, if any, in general education.

"2. A statement of the occupational objectives, if any, for which it offers training.

"3. A statement of its objectives in individual development of students, including health and physical competence.

"This statement of purposes must be accompanied by a statement of the institution's clientele showing the geographical area, the governmental unit, or the religious groups from which it draws students and from which financial support is derived."

As a corollary to its statement of individuality, an institution must offer evidence that it has a clientele to be served by the peculiar purposes it has in mind. This statement calls for specific indications of the geographical area, the governmental unit, or the religious group from which the institution draws its students and from which financial support is secured. The Association asks for evidence on these points in order to have a basis for the evaluation of the degree of permanence promised by the institution.

3. The Statement of Policy is more inclusive than were the standards. This increased comprehensiveness is shown by the inclusion of several criteria that are entirely new in the sense

that no provision was made for them under the standards. The following are illustrations:

a. Institutional study. An institution is expected to submit evidence that it is actively studying the problems it faces as an institution of higher learning. Information is collected with reference to the number and value of studies, areas covered, personnel and general methods, publicity, and the use made of the information gathered through the studies relating to the educational problems of the institution.

b. Quality of instruction. The standards made no specific provision for a consideration of the instructional work except as it might have been included under the tone and atmosphere of the institution. Under the new policies, attention is given to the administrative concern for good teaching, the means of stimulating scholarship, adaptation of instruction to student body, marks and examination policies, and alertness of the faculty with reference to teaching problems.

c. Student personnel service. Practically no provision was made for this phase of an institution's activity under the standards. Now, definite provision is made for collecting data showing the extent and character of an institution's personnel service for its student body.

4. The Statement of Policy is also made more comprehensive than were the standards through the inclusion of more items under rubrics common to both. One example will serve to illustrate this difference. The standards include under faculty the following items: size in relation to student body, training, and hours of instruction per week. Under this same general rubric, the Statement of Policy has three general heads:

a. Faculty competence, which covers advanced degrees, years of graduate study, years of teaching experience, books published, articles written, membership in learned societies, and participation in the programs of such societies.

b. Faculty organization, including ratio of faculty to students, the preparation for the field in which the instructor is working, the faculty organization, the meetings, and the functions of faculty committees.

c. Conditions of faculty service, which includes salaries, tenure, teaching load, methods of recruitment and appointment, aids for professional growth, provisions for leaves of absence, retirement, insurance, housing, and recreation.

The new process of accreditment not only involves the differences that have been indicated, but there has been a change in the methods by which information is gathered upon which the decision with reference to the accrediting of an institution is based. For a number of years, the Commission on Institutions of Higher Education of the North Central Association has designated the Board of Review, which consists of seven persons, to consider the case of each institution newly applying for accreditment, as well as cases where for any reason the institution was not accredited without reservation. It has been customary for this Board of Review, through the Secretary of the Commission on Institutions of Higher Education, to collect certain information from any institution that was being considered for accreditment. After these data had been assembled, they were put in the hands of an inspector who went to the institution and ordinarily spent only a day. He checked up on the data that had been reported and formed his own impressions of the institution. On the basis of this experience he wrote a report of his inspection and made a recommendation as to whether or not the institution should be accredited. The Board of Review, on the basis of the data that had been collected and the inspector's report, made a recommendation to the Commission regarding the accreditment of the institution. The inspectors were not paid for this service and a charge of $50 only was made the institution.

Under the new procedures, an institution applying for accreditment will make application to the office of the Secretary, and at the same time it will make a deposit of $400. An application calling for certain information is then sent to the institution. If this information seems to indicate that the institution will not be likely to receive recogniton, word is sent to the president advising him to withdraw his applicaton. It is made clear, however, that, if he desires to go ahead with the inspection, arrangements will be made to send inspectors to the institution. In the last analysis, the chief administrative officer has to decide whether or not he desires to attempt at any given time to secure accreditment for his institution. If the application is withdrawn, the inspection fee, with the exception of $10, is returned to the institution. This $10 is kept to cover the cost of the Manual of Accrediting Procedures and the work that has been done in the analysis of the preliminary report. If the president decides to attempt to secure accreditment for his institution, two complete sets of the schedules are sent to the institution, one of which is filled out and returned to the Secretary's office and the other is for the files of the institution. In the Secretary's office the data contained on the schedules are assembled and put in convenient form for the use of the inspectors.

The North Central Association, in its application of this method during the past year, used six persons only. They were recognized leaders in the field of higher education who had been interested in the study of problems of higher education, and most of them had had experience in making surveys. These inspectors were paid for their services. In advance of the time that they began their regular work of inspection, they were brought together at an institution that had applied for accreditment. The entire group studied this institution. As a result of this experience the inspectors came to a common basis of understanding with reference to procedures to be used and methods of evaluating the work of an institution. Following this, the inspectors were assigned in groups of two or three to several institutions. They visited each institution and spent at least three days in studying it and in preparing a report. This report was then sent to the Secretary's office, and from the data on the schedules and the score-cards what is known as the pattern map of the institution was prepared. The map, together with the written report submitted by the inspectors, constituted the grounds upon which the Board made its decision as to whether or not the institution should be recommended for accreditment.

In order to get a complete idea of the way in which the new Statement of Policy operates, attention should be called to the fact that the member institutions are required to supply information with reference to certain items included on the pattern map each year. In advance of the last annual meeting, each institution was asked to furnish information on the items under finance and library and also to send a statement of objectives and the data on clientele. Next year it is planned to include the items under faculty. In this manner, in a period of approximately four or five years it is expected that data will be gathered on all, or at least most, of the items included in the pattern map, which is based on the Statement of Policy. These data will be the basis for the preparation of a new profile, which will displace the one based on the original study of the fifty-seven institutions. A pattern map of an institution is a graphic representation on a percentile basis of an institution in comparison with the fifty-seven institutions included in the orginal study.

This year, the institutions that fell below the tenth pencentile on four or more of the ten items on which they made reports were sent notices that next year they would be required to supply data on all of the remaining schedules. If these data reveal deficiencies that in the judgment of the Board of Review are adequate for calling the standing of the institution into question, the Board of Review has the power to order an inspection of the institution. When an inspection is ordered, the institution will then go through the same processes as have been described for an institution newly applying for admission. One of the serious criticisms made of the standards was to the effect that an institution once in the Association was likely to make little or no progress. Under the new procedures it will be possible by keeping a record of the standing of the institution on the items of the pattern map to determine whether or not over a period of years any change is taking place in its relative standing in the Association.

Furthermore, it is the belief of those who had to do with the formulation of the Statement of Policy that in the future the Association will not have to place so much emphasis on policing as it has in the past, but it will be free to devote a great deal more of its energies to the stimulation and education of its membership. If this end can be accomplished, it alone will justify all of the energy and money that have gone into the revision of standards of the Association.

GEORGE A. WORKS,
University of Chicago.

Dinner in Honor of Director-Emeritus Charles Riborg Mann

THE dinner session was called to order at 9:50 p.m., in the Chinese Room of the Mayflower Hotel, Washington, D. C., by Dr. Frederick B. Robinson, President of the College of the City of New York, who was toastmaster.

TOASTMASTER ROBINSON: This is really a sort of family gathering. Being one of what might be called the elder statesmen of the American Council, being, of course, much older than most of you here and certainly much older than any of the ladies in the room, when I look around this group, my mind goes back to 1918 when we had that little lick and a promise of an American Council on Education. Before I talk about our guest of the evening and then turn him over to the tender mercies of his friends I want to say that we should remember Dr. Cowling. I did not intend at first to mention anyone except Dr. Mann; but Dr. Cowling isn't here, and we should not forget that it was through his vision and his great energy that the Council got started.

But our dinner is to pay tribute to the man who really made the Council the great thing it is today. I suppose one can talk about various people and their work in various ways: one could use the language of erudition and talk in many-syllabled words, be very scholarly; one could be very analytic and make contributions to modern thought in educational theory and practice. But when any of us talk about Dr. Mann we speak not the language of our profession; we speak the language of friendship and of affection.

We give forth ideas, sometimes those ideas are good, and with wings that are terrific in their power those ideas spread over great distances and penetrate many minds. Then sometimes we create words, words that may be persuasive, vocabularies that may be just right for the occasion. And then sometimes we do things, we create things that are material, we create books, we create works of art, we create things that are useful to humanity; but the thing that impresses us most about Dr. Mann, who has done all those things, is that he was making the most difficult thing for anyone to make—he was making himself, he was making a personality, a man of high character, of affection for his fellowmen, one whose sweetness of disposition and yet whose wisdom of mind can be recognized by anyone. That is the greatest thing that any one of us can do, to make himself, and we are here because we like the job that he did in reference to that person Charles Riborg Mann.

I am not going to speak very long as toastmaster, not because I am disinclined to speak or because I hesitate to seize the opportunity whenever it is afforded me, but there are other considerations tonight. I do wish, though, just briefly, to say something about Dr. Mann. It is a message from my family as well as myself, since he is the only one I get jealous of when he comes up to my house, because my little daughter seems to prefer him to me; and my son is perfectly happy to sit down and talk with him; and Mrs. Robinson will even tolerate his pipe, while she looks askance at a Camel cigarette if I happen to have it. When you get a person like that, who can insinuate himself into the very affections of the people you think you can monopolize, then you look at him as a dangerous man.

Wherein lies the danger of this man? Well, he is dangerous because he is so confoundedly friendly. Now if a man is your enemy he is not so dangerous, you can whack him anywhere, but when he is so friendly what can you do? He can take advantage of you; he's one of you. Another thing about him is that he is tolerant. We hear a whole lot about tolerance. Usually a man is tolerant when he agrees with you, but here is a man from whom I have absolutely opposite views on a great many things. We are certainly very opposite in disposition because, whereas he is friendly and you might call his disposition honey, mine is vinegar. But, nevertheless, he can tolerate me, and when a man can do that it means he is a tolerant man. Now that's a dangerous fellow, because when he tolerates you how can you oppose him; how can you take a fall out of him? He is too confoundedly tolerant—a very dangerous man.

He is trustful—he trusts everybody. I don't know how it is financially, but intellectually he reposes confidence in people, trusts everybody! It is a bad thing. If a fellow doesn't trust you, then it is fair enough to put one over on him, but what can you do with a man like that, when he trusts you?

And then, after he insinuates himself and gets this unfair hold on you, what does he do? He begins to plant ideas! He doesn't tell you in a clean-cut, straightforward, two-fisted way such as Huey Long would use; he doesn't say, "This is the way it should be done"; he couldn't put over the NRA the way General Johnson did. What does he do? He starts to make you uncomfortable. He puts ideas in your head—he stimulates you to think! Now that's not fair. And then after you think, what does he do? Does he try to control the way you think, and say, "Here's point A in your thought, now proceed logically to B," until pretty soon he has his whole program developed? Not at all. He does the mean, contemptible thing of letting you think it out your own way.

Then he has a foolish notion in the back of his head. Now I have been won over to the notion, too, and the notion is something like this: That in every human being and in great groups of human beings there is an evolution, a movement, something within that is working itself out toward higher and better things. Just what the next step is or what the ultimate goal is we don't know, but we have a faith and confidence that something good is going to come if only our minds will be eager, be searching for that good. So he stirs you up; he starts you working in order that you may evolve out of yourself the best of which you are capable. Or it may be that an organization may develop something peculiar to it, responsive to the impulses of good that are in it, and so out of that, in a working of the spirit and the mind, something good he thinks will come.

Now the American Council has grown. It has lined up to itself the influence of great learned societies, of big foundations; it has more than doubled in membership, has gained financial resources far beyond what we dreamed of in the pioneer days, and how does that come about? Because we have this insinuating individual who has an idea that there is some good in humanity and if they will only stay with it they will work it out.

So I get him on all those counts, and call on everyone else here to amplify that indictment. The first man I am going to call on I have known a good many years; I have worked with him in many, many fields, not only when he was here in the Bureau of Education at Washington but also when he was President of the University of Akron, and in the forensic battles of the Association of Urban Universities. He is now the successor to Dr. Mann as Director of the Council. I present Dr. Zook.

DR. ZOOK: For anyone to set forth what has been done by my predecessor, Dr. Mann, and before him by Dr. Capen, would be very embarrassing indeed to the present Director of the Council. It gives me a sense of deep responsibility for what has been passed on to me. Indeed, the chief feeling that I have tonight is that the officers of the Council, including the Director, have been given a great heritage, a heritage of loyalty, of unexampled good will and of the finest spirit of cooperation I think that I have ever seen. From far and near men and women come to Washington or to other cities at the invitation of the American Council on Education to cooperate in educational ventures of one kind or another. That is a heritage which we owe to the man who has served as the Director of the Council for these past twelve years. I certainly appreciate it very deeply indeed.

I think I could do no better tonight for the few moments which have been accorded to me than to try to amplify two or three of the ideas which Dr. Mann has preached throughout these years as Director of the American Council of Education. He has always emphasized the fact that the American Council on Education is a council, that it is a device set up by the leaders of American education which may be used to bring together the best minds in the field of education, with the hope that out of this council may evolve policies and plans of national significance. That idea is one which is at the very bottom of the work of the Council.

Our friends in politics and in other lines of life tell us quite frequently that there is a very great need for educators to agree upon something or other. Whenever any attempt is made in Congress or elsewhere, to secure action on an educational problem, the statement is made that possibly a policy may be put across, if we will but agree upon something. With apologies to our honored guests, the Members of Congress, who are present tonight, I may say that I sometimes find that members of the Senate and of the House of Representatives also disagree with one another about many different problems, so that educators are not alone in their differences of opinion. But there is need to come together and counsel with one another for the solution of those problems of great national consequence. With this idea in mind Dr. Mann has always stressed the need for laying the basis of the Council on the widest possible foundation. It is a tribute to him, and incidentally to the institutions themselves, that during this period of the depression the membership of the Council, without any effort at all in most instances, has remained equal to that prior to the depression and has even grown during that period. I look upon that as an accomplishment of the first consequence.

With the reorganization which took place this last year we have a still further opportunity to lay a broader basis for the work of the Council, and I trust that the example which has been set by the Director in the past may prove an inspiration to us in the future for continuing that kind of an effort.

The American Council on Education proceeds with its work in the formulation of policy not merely upon the basis of opinion, as was of course the case throughout the whole field of education until a generation ago, but it insists upon coming to its conclusions on the basis of scientific inquiry, so that practically no work is undertaken by the Council without an extensive inquiry in the beginning to ascertain whether the facts indicate that the proposed policy is wise or not. I am very glad, therefore, that the Council may be said to proceed upon a basis of scientific inquiry as well as of mutual consideration.

All of you will remember, as has been indicated here tonight, that the American Council on Education was born during a period of great national crisis. It was soon apparent, however, that there was as much need for an organization of this kind in times of peace as in times of war, and therefore even before the War was concluded the Emergency Council on Education had already become the American Council on Education, and it has since that period dedicated itself to the service of which I have spoken.

We are today faced with problems which, although very different from those in 1918, are no less serious. We are indeed confronted with a crisis in which education must play an exceedingly important part. I hope that in the consideration of these problems the American Council on Education may assume that leadership to which it aspires to serve. I have undertaken this work as Director of the Council and as the successor of Dr. Mann with a deep spirit of humility and a deep sense of responsibility. I hope that I may carry forward the splendid work which has been so well done by him during these years gone by.

TOASTMASTER ROBINSON: I am sure we all agree that there could have been no more fortunate choice than Dr. Zook to carry on the work of the Council at this point in its development, to bring further fruit from the seeds that were planted before. He is the ideal husbandman for this particular job.

Our next speaker is Dr. Capen. He was the first Director of the Council and was selected at the time when the little inner circle were looking around for the best man then available. No one could more appropriately present the appreciation of Dr. Mann than Dr. Capen. I call upon Dr. Capen.

DR. CAPEN: From 1922 to 1934, Dr. Charles Riborg

Mann served the American Council on Education as Director. He brought to the office wide knowledge of the theory and practice of education at home and abroad; a national reputation as teacher, investigator and administrator; mature wisdom; and a singular capacity for persuasive interpretation. When he assumed the directorship the Council was already organized and its functions were broadly defined, but its policies were still in the making. It had been established to meet a need that had long been patent, the need for a central organ of cooperation and coordination which, without invading the autonomy of institutions and interests within the American educational system, should promote common action in matters of common concern.

From the beginning of his administration Dr. Mann saw clearly the course which the Council should pursue to realize the purposes of those whose joint efforts had brought it into existence. As he conceived it the Council should devote itself to scientific inquiry, to the provision of machinery for consultation, and to the stimulation of experimental activities by institutions and groups of institutions. Through conference and investigation it should seek to isolate and clarify educational issues of national significance. It should define problems and enlist appropriate agencies for their solution. As the result of the exchange of opinion and the discovery of facts it should foster agreements designed to improve educational practice. In this way the Council, representing the majority of the educational organizations of the country, could act as the mobilizing force for directing hitherto unorganized energies of the educational profession. It could bring about unity of outlook and of purpose.

With unflagging patience and with perfect consistency Dr. Mann strove to translate this conception of the Council's mission into reality. During the twelve years of his directorship the Council experienced a steady growth in the number of participating organizations and institutions, in financial support and in prestige. When his term of service ended it had become the principal agency in the United States for the investigation of national educational problems, the inevitable custodian of funds contributed for educational inquiry by philanthropic bodies and individuals, the focus for cooperative planning and experiment, the recognized national representative of American education in all its varied manifestations.

The American Council on Education is a distinctly American creation. It has and can have no counterpart in any other country. It is an expression of the peculiar genius of the American educational system; a system without national controls, made up of a vast number of autonomous units, each the product of local sacrifice and idealism but each cooperating voluntarily with others for the establishment and enforcement of educational standards. The Council in organization and policy is consonant with the character of this highly individualistic and democratic system. It represents the last step in the direction of voluntary cooperation for the improvement of American education.

Many of the ablest members of the educational profession have devoted time and thought to the formulation of plans and to the prosecution of the activities which have brought the Council to its present stage of development. But throughout his term of service it was Dr. Mann's leadership that directed their efforts and rendered them fruitful. It was his vision of the Council which they and he together gradually wrought into fact.

As one of the Council's spokesmen on this anniversary occasion it is my privilege to record our grateful appreciation of his unique contribution both to the upbuilding of this organization and to the public welfare, and to express our confident hope that in his capacity as Director-Emeritus he will continue to exert a formative influence on the future progress of American education.

I now invite your attention to these resolutions on which I should like your action:

WHEREAS, Charles Riborg Mann faithfully and effectively served the American Council on Education as its Director from December, 1922, until his appointment as Director-Emeritus in May, 1934; be it

Resolved, That we express to him our:

ADMIRATION of the qualities of scholarship and ripened experience as Scientist, Educator, and Administrator, which he brought to bear upon his work for the Council;
APPRECIATION of his leadership in shaping the policies of the Council in matters educational and financial, in bringing to the Council the support of great foundations and learned societies, in increasing its membership of colleges and universities, in outlining research projects that have resulted in important benefits to education and, through cooperative enterprises, to current social organization and in assuring the Council a permanent and useful place in American life; and also our
GRATITUDE for the privilege of fellowship with a courageous, kindly and modest gentleman of the highest integrity; and be it further

Resolved: That we wish for him many years of health and happiness and of continued usefulness to the Council as its Director-Emeritus.

MR. TOASTMASTER: I move the adoption of these resolutions.

DR. P. R. KOLBE: In seconding this motion, I move you, sir, that these resolutions be suitably engrossed upon vellum or parchment with proper illuminations, and be presented to Dr. Mann as a lasting testimony of our regard and our gratitude.

TOASTMASTER ROBINSON: I accept the second of Dr. Kolbe with his elaboration of the motion. All in favor of the resolution as so stated please say "aye." Opposed? It is unanimously carried.

Our next speaker, General Robert I. Rees, was associated with Dr. Mann during the war. General Rees, as chairman of the War Department Committee on Education and Special Training, drew largely upon counsel and advice of a Civilian Advisory Board, set up by the Secretary of War, and Dr. Mann was chairman of that Board.

GENERAL REES: Mr. Chairman and friends of Dr. Mann, in standing before this distinguished audience, I may lack strength in thinking that I can say anything to you worth while, but I do feel strong in my subject. If I talk personally, perhaps too much so, I know that you will forgive me, because that which I shall say is born of devotion founded upon eighteen years of intimate friendship.

I can say that Dr. Mann is a great American educator. I know that because he educated me. When for some unknown reason I was catapulted into a great wartime educational project, I found that I had to run to try to catch up with Dr. Mann in the consideration of the educational problems that faced us both, but I never caught up. I'm running still.

I don't know that I can give you an interpretation of my feeling for Dr. Mann. I don't know whether he would accept it if I did, but I shall try. We all know that Dr. Mann began his life's career as a physicist, that he was a protégé of Professor Michelson and had a great future before him in scientific research. But there was a magnet in his heart which drew him away from the consideration and study of materials and forces and attracted him into the study of the science of man. So instead of becoming a physicist scientist and a researcher in material things, he became first a great teacher. He brought to the art of teaching physics a realism, and avoided teaching the subject as a group of abstract principles. He made the subject of physics human and inspiring.

Curiously enough, in a problem which is facing a group of us in New York in the organization and development of what is known as the Engineers' Council for Professional Development, and particularly in that phase of it for which I have some responsibility, which is a plan for professional training of the young engineer after he graduates, I find that Dr. Mann is contributing strength to me in the study of that problem, for I have on my desk a copy of his study of engineering education. This concerns the phase of his career as an investigator. I cannot resist reading a few very brief quotations from that report, because of their helpfulness to me, and also as an indication of the progress of his thinking.

Talking of admissions, he tells the engineering schools that admissions should be based on measure of ability. The central problem of education, if you can measure ability and aptitude and capacity, becomes vocational guidance. "If any reasonably trustworthy method of discovering what work each individual is best fitted for can be found, the other problems of education will in large measure solve themselves."

In his observations on the time schedule, he reflected upon that particular period as being one in which from outside pressure, I regret to say industrial pressure, the curriculum had reached a high degree of specialization which bore down upon the poor student, confused him and made his life one scramble for credits. Dr. Mann advocated that the curriculum be simplified, that there be set some criteria of achievement, and again brought up the matter of measurement of human behavior in the field of objective tests. It would seem that his thinking as early as 1914-1917 was at least a score of years ahead of the times.

About the curriculum here is a quotation: "There is a widespread agreement among professional engineers that the college curriculum should aim to give a broad and sound training in engineering science, rather than a highly specialized training in some one narrow line; that considerable attention should be paid to humanistic studies like English, economics, sociology, and history, not merely because of their practical value to the engineer, but also because of their broad human values; and that the young graduate should have some conception of business management and of the most intelligent methods of organizing and controlling men." We were not saying this during the war period and before. We are all saying it today.

He also said: "The new plan is based on the proposition that it is possible to analyze engineering practice and to make a list of all principles, facts and theories that are essential to the equipment of every engineer, and then to organize this subject-matter into a curriculum in which the several types of work are inter-related in such a way that their inherent relations are obvious to the learner. Such a curriculum satisfies the professional demand for broad and fundamental training for all engineers and renders superfluous the requirement of two or three years of pre-engineering work in a college of liberal arts."

Again: "The educational interpretation of this professional demand is not nearly so mysterious as many have tried to make it. For the schools have already discovered that students learn best when they are inspired by the conviction that the work is really worth while. One of the most effective ways of making work seem worth while is by constantly relating it to the consideration of the whole range of values involved and all the costs. Every decision in daily life is an answer to the question whether the value is worth the cost. The omission of this mainspring of all investigation and inquiry from school work is perhaps the chief reason for the breach that separates the schools from life. Hence the first message of the profession to the schools is—motivate your work by making it worth while; liberate the spirit of investigation by making the game worth the candle; for character, judgment, efficiency, and understanding of men develop best in men who work with enthusiasm and intelligence at things that they believe to be worth while."

Of course, we all know of the later investigation of engineering education, which had its value in that it demanded the participation of all members of the faculties of the engineering schools, and aroused great enthusiasm. In no way did this investigation challenge the philosophy and the fundamental concepts of engineering education which were stated by Dr. Mann.

As a physicist, as an investigator, the line of Dr. Mann's thinking goes through to the time of the great emergency, and of that I enjoy talking. Through some mysterious means of which I am not altogether fully aware even to this day, I was given a responsibility which perhaps involved one of the greatest educational experiments that we had undertaken up to that time. Perhaps it came to me because of my vital interest in the work of the Committee on Classification of Personnel, representatives of which are with us tonight, of which Dr. Walter Dill Scott was the leader. Purely by accident I was able to help Dr. Yerkes in establishing the test service in the Army, and it was while those things were going on that I was called on to be chairman of the Committee on Education and Special Training.

I could stop talking right this minute and all friends of Dr. Mann—and there is probably one at each of these tables who participated in that work—could commune together and probably develop the whole story much better than I am able to do. I think it was the members of this Council who were conspiring to convince the War Department that it was the educational system of the country that must win the War. I do not recall whether the Council was actually organized at the time, but I believe it was.

I knew administration, but, of education, little. The educational problem, however, was happily solved. Dr. Mann was appointed Chairman of the Advisory Board of the Committee on Education and Special Training. With his clear thinking, direct methods of simplification when it came to considering programs for the National Army Training Detachments and later of all the colleges of the country when they were practically put on a military basis, there was a guiding hand that made clear all of the problems that seemed unsolvable by an ordinary soldier. It was a great adventure. Dr. Mann had the faculty of attracting to his assistance the leaders of the educational world. In their enthusiasm and unremitting effort I am sure they will tell you they were inspired by Dr. Mann's fine leadership.

The National Army Training Detachments presented a vocational problem, but his simple, direct development of the educational policy of specification, job analysis, and unit operations reduced the training period to make efficient technicians and mechanics in an almost inconceivable manner. As far as college detachments or the college work of the SATC was concerned, it was Dr. Mann's desire that as little disturbance as possible should be made in the regular curriculum work. Of course, there was the demand for considerable military drill, which was somewhat time-consuming. The only other requirment outside of the regular curriculum of the college was what was known as the War Issues Course. Dr. Mann and his associates conceived that it was necessary without propagandizing in any manner, if these young soldiers being trained for officers were to do their part nobly and understandingly, that they should understand the causes of the War and the reasons for our participation therein. He invited Dr. Aydelotte to come to Washington, and he prepared the course and put it in operation. It was so good that I am sure the impress of his work is still continuing in many institutions.

On my return from France in 1919, I was detailed again to the general staff in Washington, with Dr. Mann waiting for me, thank heaven, and we developed the educational and recreational program for the permanent army. There again came Dr. Mann's leadership in developing the program, in determining the kind of education that should be given, establishing a school of instruction for officers and civilian instructors, and making a very permanent and indelible impress on the conduct of training and education within the regular army of the United States. Again was illustrated Dr. Mann's sound educational philosophy.

Now those are the things that Dr. Mann did as a warrior. We have talked about him as a physicist, as an investigator, and he was a true warrior; he bent his every effort toward seeing that the young men who were within our responsibility—and there were over 300,000 of them—should go to France trained, and equipped with the right spirit for loyal service to their country.

Now I am not going to invade the province of Dr. Capen and Dr. Zook in telling of the things that Dr. Mann has done in his past twelve years of service with the American Council. Just having a glimpse of his philosophy of education, I think he had an idea that education should be founded on a study of the work of the world, that we must find out what that work is both comprehensively and in great detail also, and then out of the infinite number of activities that human beings engage in we could discover what it is fundamentally necessary for people to know, and particularly young people, in order that they might build their careers in accordance with their aptitudes, abilities and capacities.

Job specifications—anathema! How in the world could such a common term approach or make contact with higher education? But when you see his conception as a determination of the fundamental things that men have to do in order to live, and that such an analysis of the details would give the educational fundamentals, I think it becomes clear. But it did not make a strong appeal. Even with the courage that Dr. Mann had, he seemed to be forced to change his terminology and use words of more classic origin. So we have "records of usage" and "criteria of achievement." Imagine my shocked surprise within the last ten days at reading an article by Dean Seashore entitled "A Job Specification for Higher Education"!

We all know from reading the record that Dr. Mann stands for action and for that action which is worth while, but in all of these things that Dr. Mann has stood for, how are they represented today in existing activities? I have mentioned that he is giving silent leadership in a great undertaking for the engineering profession. The National Occupational Conference, an organization in New York of which I happen to be chairman, is now concerned definitely on one hand in a study of occupations, their classification, analysis and trends; and, on the other hand, with the study of individual aptitudes in order to train the young people in the country for the jobs for which they are fitted. Here in Washington as a basis for developing efficient national employment exchanges is the group under the Secretary of Labor, studying this same subject—occupation, classification and specification and the study of individual differences for the purpose of building occupational ability patterns for the fitting of the jobs that the employment offices have with the people who are unemployed and in need of jobs. Altogether, this foresight of Dr. Mann, as expressed in his study of engineering and all his later work, and his continual insistence in thought and action on his basic conception, are bearing fruit wonderfully today. They are becoming accepted as obvious.

I didn't mention the important activity of the American Council under its Committee on Personnel, the Test Service and the Record Bureau. I don't know that that was Dr. Mann's conception, but I feel he must have had a very important hand in it.

Now Dr. Mann has shown no opposition to the educational philosophy of John Dewey; he has simplified it in expression and made it more human. He is altogether in accord with that very human philosopher, L. P. Jacks. He agrees absolutely with Aristotle in his study of man, that the end of man is an action. I read very recently a definition of culture by President Conant. "Culture is a term used to represent the sum total of all those activities of the human mind and spirit which is an integral part of our civilization." I know that Dr. Mann agrees with that definition because his whole thought in aiding man has been an integration of body, mind and spirit looking toward development of the individual to his full capacity.

Dr. Mann, in the full reality of the expression, you have been a great benefactor of mankind. We love you, we respect you, we give you our heartfelt devotion; and now that you are relieved of administrative responsibility, I know that through study, reflection, meditation, and action you will continue to give us your leadership as a great American educator.

TOASTMASTER ROBINSON: Ladies and gentlemen, you have heard all the indictments. You have heard all the evidence against the alleged culprit at the bar, so we are now going to give him an opportunity to put in his defense. I call upon Dr. Mann.

DR. MANN: Mr. Chairman and colleagues, I understand it is good legal technique when you are faced with such an array of indictments to plead guilty. Therefore I begin my appreciation of your kindness and the joy that you have given me in all these years, by confessing. Mr. Robinson was a little unkind, perhaps, to point out that I am a dangerous man and that you'd better watch out, but I must accept such a thing without partisan judgment. I am very glad indeed to plead guilty, to accept your indictments and to express my hearty, loyal, warm appreciation of your friendship in coming here, and of the many beautiful letters and telegrams that have been sent to the Council during the last few days, expressing regret in some cases that they could not come but always sending a message of heartfelt appreciation.

Now, one of the indictments I would like to follow up a little bit. Since I plead guilty, I would like to tell you a few events in my existence that may throw a little light on the reasons for my being guilty of all these crimes of commission. You notice they didn't list the crimes of omission.

The first point I want to make is this. A thing that has always impressed me is a little remark that Jacks makes in one of his books. He says the most impressive thing about civilization is the fact that humanity has lived on this world for some 25,000,000 years, yet still seems to be going strong in spite of all the outrageous things we have done to each other. Such outrageous things are going on at the present time. Somehow or other things do go on and get better. It takes a long time. You see the thing that impressed Jacks was that after 25,000,000 years humanity is still going on. That fact has always given me a skeptical feeling that was well illustrated by the small Sunday School child whose teacher was trying to impress upon him that God is omnipotent—can do anything. But the youngster wouldn't believe it. Finally the teacher thought she would corner the youngster, and she said, "Tell me something that God can't do."

"Ah," said the kid, "He can't make a two-year-old calf in a minute."

I have remembered that, and those of you who have worked with me have heard me say that a great many times. When things that take a good many years to accomplish don't get accomplished in a minute, lots of people get discouraged and give up the fight.

Hence the first point in defense of this indictment is to remind you that it takes a long time to make transformations in human life. You mustn't be discouraged, then, if you don't get the desired transformation immediately. I have waited ten or fifteen years for ideas that I thought ought to be accomplished and ought to be done for the benefit of everybody promptly; still they didn't get done, and things rolled on. Take the engineering report I brought out in 1918. It was ten years before that thing began to be read and studied and appreciated. Why? Because the engineerin engineering schools was not ready for the ide in that engineering report, and it took then catch on. I had the same experience with a b great many years ago, a book on the teachi That was published by the Macmillan Compa to a request from President Butler of Columb ten years after that book was published bef to sell any reasonable number of copies. Then up and took an interest in it, and it began to se

You know there are many events in life th many of these sins of commission that have and charged against me. In the first place, I say that I owe the personality that I am charg been guilty of developing to my parents. My just parents that happened to get married and My father's ancestors came over shortly aft and they lived in this country from then on. father, or great-grandfather—I don't know genealogy is—who was a captain at the Ba Hill. So I have a long American lineage throu owe a great deal to that long evolution.

Now my mother was a person of quite diffe The first valid history we have of her family in the Catholic Church in Rome fell in love wi young woman in that neighborhood, and since Catholic Church did not permit them to be eloped and ran away from Italy to Denmark. in getting occupation there in the Lutheran Ch lished a line of bishops. My mother's gra bishop in the Lutheran Church in Denmar father, my mother's father, was the oldest so and was destined to succeed as bishop. But the Italian I told you about. He fell in lo attractive young woman, but this young wo erness, and it wasn't at all according to the rule the son of a bishop, destined to be a bishop, ma

So they ran away and got married and he was disowned. He then settled in a little town in Denmark, and my mother was born there and lived there till she was twelve years old. Then her father decided this was a great land of hope, and they moved to America. The family came over on a sailing vessel when my mother was twelve years old, and settled in Chicago. There my mother met my father. On his return from the Civil War they were married.

I mention that not for the purpose of establishing any genealogical history nor for the sake of evidence for the Sons of the American Revolution or for some of these people who have been trying recently to prove I am a Communist, but simply to record the fact that evolution takes a long time. There is a long history back of every individual.

I am not going to tell you a lot of incidents in my life, but only a few significant ones. I went through private high school and through Columbia College, where I was awarded various mathematical prizes and the John Tyndall fellowship, which sent me to Germany for three years. There I learned a lot of German ways and took a foreign degree. When I came back it just happened that I landed in the University of Chicago as the personal research assistant of Albert A. Michelson. For the first three or four years I was there it was my job to work at Michelson's elbow, helping him do his researches. I had nothing to do with the students whatever, excepting when Michelson said, "You just look after that student a while so that I don't have to be interrupted." I worked for three years at least as Michelson's special research assistant, helping him do some very constructive physical investigations.

I don't hesitate at all to say that I learned more about the real workings of science from that personal relationship with that man than I ever learned in the three years I spent in Germany having lectures handed out to me by noted physicists. Michelson was a great man.

I learned one other thing in Chicago, for I was there eighteen years, and that other thing I learned from a totally different source, from William Rainey Harper, president-founder of the University of Chicago. Harper was a most remarkable fellow. I remember one of the first stories I heard about him when I went there. He had established this new university and he had invited from all over the country the men whom he thought were particularly gifted men, to lead the departments in this university. They had set up a curriculum that was molded in such a way as to win academic respectability. It was designed to show all the universities that he wasn't starting an upstart institution. He was going to start a real university.

One of the men had a short leave and went down east, where he had a lot of acquaintances in the old institutions. When he came back President Harper said to him, "Well, what do you find your colleagues down east think of us in Chicago University?"

The man answered, "They think we have some of the best men in the country out here and that we are doing some very interesting work."

Said President Harper, "I don't want to know what they are saying flattering about us. What fault are they finding with us?"

"Well," said this professor, "I don't like to tell you."

Harper replied, "But the criticism is what I like to know."

"If you must know," said the professor, "they think we lack tone."

Harper thought it over, and he said, "We lack tone. Well, we must get some tone."

That was the attitude of the president when he founded the university. That was before I got there. I had been there about two years when they established a Curriculum Committee to remodel the curriculum. The curriculum they started with was something awful. A fellow couldn't take a B.S. degree without three years of Latin in college. A lot of us scientists thought it was an outrage. The various onslaughts on this academic respectability had not accomplished much because President Harper was going to have a recognized institution. They made me the secretary of this Curriculum Committee. I had to send out changes for them to think about and questions for them to answer. While we worked over that several years I watched Harper's evolution. I saw him change from a man intent on ostentation of academic respectability to the creator of an institution that would really teach its students to be men and women. As a result of the activities of that committee, all objectionable features were abolished, including the Latin requirements. The institution gave up the effort to get tone by conventional academic methods. We went on to get the entrance requirements changed. Finally a series of entrance requirements was adopted in which the only thing that was specifically required of the students was that they write and speak the English language decently. There was no mathematics requirement, no foreign language requirement. That plan is still in force at the University of Chicago. Other institutions of the time said, "Well, how did you ever do it?" The answer was simple, because it was based on a study of the actual facts of what was happening in the secondary schools that were sending the students to Chicago. It was just plain common sense. It was the thing that anybody would naturally do when he had that kind of situation to deal with.

These were the events that led me to transfer my interest from the physics that Michelson stood for to the education in which Harper was interested. I look back on my Chicago experience as having brought into my life two great characters, very different, and yet with something in common. At any rate these two had an enormous influence on me in developing this personality of which I plead guilty.

You have heard something of my war experience and of my engineering experience, which took me away from Chicago. I was called away from Chicago because I was a non-engineer who had nothing to do with engineering and who yet had a lot of scientific experience in physics. I had also traveled around visiting many secondary schools while working on the curriculum at Chicago, so I secured a lot of educational experience. Therefore I was thought to be a fit victim to be trusted with this engineering study. After three years of engineering study, the War broke out and I was called down here because the Army had to have training in technical things, and had to have somebody that knew something about it to help do that.

In the military machine I fell into a very unique and unusual situation, because I knew nothing about the military. The only experience I had with the military was years ago when they undertook to introduce military training at the University of Chicago. A young lieutenant was sent from Washington to give military drill. Once I was watching this young lieutenant out on the campus with a bunch of students, and I thought, "What in hell has this drill to do with education?" That young lieutenant's name was Palmer. He had some physics problems and came in to see us about them. That young fellow named Palmer was John McAuley Palmer, who became the special confidant of General Pershing. After the war he was the special adviser to the Senate Committees on the reorganization of the army. My first acquaintance with Palmer was seeing him drill freshmen out on the campus and wondering what that had to do with education. Palmer is one of my warmest friends and one whom I really admire a great deal.

When I came to the War Department I found that a double-headed organization had been planned by Secretary Newton D. Baker. The army had all the authority over men and money. In addition, there was a civilian division under my leadership but coordinated with this military authority, under command of General Rees. All we did in the army each day was to meet the situation that had to be met that day. And during the War there was a different situation to be met every day. The military committee of three, under the leadership of Rees—Rees was a major when I first met him—contained also a Provost Marshal General, who was none other than our bluebird friend General Hugh Johnson—and an adjutant general, Colonel Granville Clark. I got a great kick out of the relations I had with those military gentlemen.

I used to notice that after office hours, when the day's immediate situations had been met, Rees used to come in and talk over what we were going to do the next day and how we were going to meet the situation of each following day.

This combined military and civilian organization induced the War Department to take over the colleges. This resulted from a purely material necessity. From our experience we had enough facts to prove that it was cheaper for the War Department to place 150,000 young men in training in the colleges, and to pay the colleges the money for their subsistence, than it was to build more cantonments and to give the soldiers their military training in a military camp. Because it could be done better and for less money in the colleges, the Student Army Training Corps was approved by the War Department and military training was established at the colleges. Thereby the university spirit and the college organization were also saved for the nation.

When the War was over, the question naturally rose: What can be done with education in the regular army? It had been a great help in finding officers, in training officers, and in training technicians for the army. So Congress gave the War Department money to add an education and recreation section and to set up schools in every army camp. The military authority and leadership of that enterprise was placed on General Rees and I was appointed Civilian Adviser to the General Staff, thus carrying on the same double-headed arrangement that Secretary Baker had introduced during the War. We established schools in every camp and gave some interesting demonstrations to some of the army officers who did not believe in that sort of thing. However, they soon came to accept it.

There was one very interesting case. The General who had charge of this education and recreation work was General Haan. He was very friendly and enthusiastic about it, but his executive officer, Colonel Lassiter, was thoroughly hard-boiled and did not take any stock in this educational enterprise. It was hard for us to get anything done in the general's office, because official papers had to go through the executive officer, and if the executive officer didn't like it, we had trouble. Finally Lassiter was sent out to command a camp, Camp Taylor in Kentucky. He thought, "Well, now I am in command of a camp and I've got to operate one of these schools in my camp. I'll give them a real tryout." He tried them out and he found that they worked so well that in about two years, when he came back to the War Department as chief of our division, he was one of the most enthusiastic men concerning army schools. He is one of the greatest soldiers they have in the army. His transformation was produced simply by the fact that he honestly tried to do well what he had to do. When he found by experience that it worked well, he pushed the program vigorously in the army.

That army experience contributed greatly to the development of the personality with which I am charged. As a civilian it was my privilege to go anywhere I wanted to at any time. I had direct access to the Secretary of War if I needed it. Hence in the army I had a unique chance to see the operation of an autocratic system and to appreciate the educational values that autocratic men find in the army. I never found amongst men high up in the army any educational doctrine that differs materially from the best I know in civilian life. After eight years of this army experience the opportunity came to transfer to the American Council on Education, where for the past twelve years I have tried to make fruitful use of the results of all my previous education.

In conclusion, I propose now to prove that I deserve the indictment of being a dangerous man. For everyone who reads the daily newspaper knows that not only the public but also the experts are hopelessly confused. The daily facts reported in the newspaper do not make sense, either in the educational field or in the economic field or in the political field or in other fields.

If you want to be up-to-date on this confusion, take yesterday's news concerning the pending bill to abolish holding companies. The President takes the position that he wants the holding companies abolished. On the other hand, the Chamber of Commerce of the United States takes the position that holding companies are the means by which our great industrial system has been built. They are a part of our corporate machinery. We have to have them. They have their abuses, but we cannot abolish holding companies.

I have the hunch that some kind of corporate organization is a very essential part of our business system. I don't know enough about it in detail to have any opinion as to whether holding companies are or are not needed. I also know that corporate organizations have done all sorts of desperate things that violate our appreciation of what's fair and just in the world. What shall we do about it?

I have this suggestion to make: I have said for some years that education and educational research will never make really fundamental contributions to the evolution of civilization, until we have an appropriate big idea to guide us. I have pointed out that physics, which is my subject, never made any really significant progress until the idea of energy was introduced. Things began to coordinate and physics began to expand as soon as they introduced the idea of energy. The same was true in the biological field. In the early days biology was but an interesting classification stunt which did not advance until the idea of evolution was invented. This idea did wonders for the development of biology.

What's the big idea in education? What idea will do to education what the notion of energy did to physics or the notion of evolution did to biology? There is a fundamental confusion in our educational thinking of the same sort as that mentioned between the Chamber of Commerce and the President. It seems to me that the confusion arises from the fact that we are living in this world in two spheres that are controlled by different forces. We are living in a material sphere where we have to have certain material necessities—clothes, shelter, food, to sustain material life. But we also need food for our thoughts, our souls, our minds. That food is an immaterial thing. Thus we live in two planes of existence that are so different that they cannot be mixed together. You cannot transfer thoughts to the physical plane, or physical materials over into the spiritual plane. Try to transfer them and nothing happens.

Therefore, I would like to suggest that the thing which will help us solve the educational problem and will help clarify differences in politics or such differences as those between the President and the Chamber of Commerce is careful distinction between things that are essential to material existence and things that are essential to immaterial existence, or the existence of the soul. If we introduce that distinction, I find practically that it clarifies problems that looked insoluble before.

I can give you many cases if you want, showing how clarification comes from holding these two phases of existence in this world totally distinct. Hence, if you want to be clear, be careful to distinguish between necessities of the soul and necessities of material life. When we thus clarify our thinking about education by separating the material facts and those that belong properly with material things, like the physical sciences, from the things of the mind and soul, we are helping find the big idea that is needed in education.

I leave you to ponder this suggestion, as is my habit according to my indictment. I thank you all for this marvelous tribute.

Academic Costume

History

THE history of academic dress reaches far back into the early days of the oldest universities. A statute of 1321 required that all "Doctors, Licentiates, and Bachelors" of the University of Coimbra wear gowns. In England, in the second half of the fourteenth century, the statutes of certain colleges forbade "excess in apparel" and prescribed the wearing of a long gown. It is still a vexed question whether academic dress finds its sources chiefly in ecclesiastical or in civilian dress. Gowns may have been counted necessary for warmth in the unheated buildings frequented by medieval scholars. Hoods seem to have served to cover the tonsured head until they were superseded for that purpose by the skull cap. This was itself displaced by a head-dress more or less like one or another of those now recognized as "academic." Both Cambridge and Oxford have made academic dress a matter of university control to the extent of even its minor details and have repeatedly issued revised regulations governing it. In the Laudian days in Oxford it was prescribed that any tailor who departed from the authorized design "even by a nail's breadth" in the making of any article of collegiate costume was to be punished by the vice-chancellor of the university.

European institutions continue to show great diversity in their specifications of academic dress. When American colleges and universities desired to adopt some suitable system of academic apparel a half century ago, it seemed to them best to agree on some definite system which all might follow. Accordingly, there was held on May 16, 1895, at Columbia University, a conference of representatives of the governing boards of various interested institutions. From that meeting came the suggestion of "a By-Law, Regulation, or Statute" for the establishment of a suitable code of academic dress for the colleges and universities of the United States. It followed in 1902 that the Regents of the University of the State of New York gave a charter to an organization named the "Intercollegiate Bureau of Academic Costume" to serve as a source of information and guidance in such matters. Of this organization the firm of Cotrell and Leonard of Albany, New York, was designated by the Regents to act as "repository." In that capacity this firm has continued and still continues to serve. In nearly every instance of the many hundreds of colleges and universities of the United States which have adopted academic dress, the standards thus prescribed have been adopted and followed, either wholly or at least in the main.

In 1932 the American Council on Education authorized the appointment of a committee "to determine whether revision and completion of the academic code adopted by the conference of the colleges and universities in 1895 is desirable at this time and, if so, to draft a revised code and present a plan for submitting the code to the consideration of the institutional members of the Council."

The Committee thus authorized has reviewed the situation through correspondence and conference and begs leave to submit the following code which suggests departure from present usage in only a few, and those very minor, details.

Committee on Academic Costume,
FREDERICK C. FERRY, *Chairman,*
JOHN A. PERKINS,
FRANK E. ROBBINS,
K. C. M. SILLS,
GUY SNAVELY,
CONSTANCE WARREN.

An Academic Costume Code

GOWNS

1. Pattern: Of the patterns commonly worn in the colleges and universities of this country, with pointed sleeves for the Bachelor's degree, with long closed sleeves (with a slit for the arm) for the Master's degree, and with round, open sleeves for the Doctor's degree.

2. Material: Serge or worsted stuff for the Bachelor's and the same or silk for the Master's degree, silk for the Doctor's

degree. As a means of adaptation to climate, the material of the gowns may vary from very light to very heavy, with linings added, if desired, provided that the material, color, and pattern follow the prescribed rules.

3. Color: Black in all cases.

4. Trimmings: None for the Bachelor's or Master's degrees. For the Doctor's degree, the gown to be faced down the front with black velvet, with three bars of the same across the sleeves; or these facings and crossbars may be of velvet of the color distinctive of the Faculty or subject to which the degree pertains, as indicated by the wording of the diploma, thus agreeing in color with the binding or edging of the hood appropriate to the particular Doctor's degree in every instance.

For all academic purposes, the colors associated with the different subjects are as follows:

Agriculture	Maize	Medicine	Green
Arts and Letters	White	Music	Pink
Commerce and Accountancy	Drab	Oratory	Silver Gray
Dentistry	Lilac	Pedagogy	Light Blue
Economics	Copper	Pharmacy	Oliver Green
Engineering	Orange	Philosophy	Dark Blue
Fine Arts, including Architecture	Brown	Physical Education	Sage Green
Forestry	Russet	Public Health	Salmon Pink
Humanics	Crimson	Science	Golden Yellow
Law	Purple	Theology	Scarlet
Library Science	Lemon	Veterinary Science	Gray

In some instances American makers of academic costume have divided the velvet trimming of the Doctor's gown in such fashion as to suggest in the same garment two or more Doctor's degrees. Oxford precedent is reported to direct that only a single degree from a single institution shall ever be indicated by a single garment. It seems bad form to have an academic gown bear velvet stripes of various colors and the imagination dislikes to contemplate the results to which such a proposal might lead if, as often happens, the wearer held doctorates in three or more subjects.

HOODS

1. Pattern: As usually followed by the colleges and uni-

versities of this country, but with observation of the following specifications—

2. Material: The same as that of the gown, in all cases.

3. Color: Black in all cases.

4. Length: The length of the hood for the Bachelor's degree to be three feet, for the Master's degree three and one-half feet, and for the Doctor's degree four feet; while that for the Doctor's degree only shall have panels at the sides.

5. Linings: The hoods to be lined with the official color or colors of the college or university conferring the degree; this to be charged with a chevron or chevrons when the institution uses more than a single color.

The various academic costume companies have in their files complete data on the approved colors for various institutions so that no tabulation has been made for this report.

It has been advocated in certain quarters that the lining of the hood may indicate the institution of the wearer's official connection rather than the one which conferred the degree which the hood shows. This proposal is counted unworthy of endorsement. It involves confusion, since even the most intelligent onlooker would be unable to decipher the academic history of the wearer. Furthermore, such a system involves the changing of the lining of the hood whenever the official connection is changed, while no article of academic dress should ever need change except when it is replaced through the wearer's gaining of another degree. Academic honors are not terminable with time.

6. Trimmings: The binding or edging of the hood to be of velvet or velveteen in width two inches, three inches, and five inches for the Bachelor's, Master's and Doctor's degrees respectively; while the color should be distinctive of the subject named in the diploma given in conferment of the degree.

For reasons given in characterizing the velvet trimmings of the Doctor's gowns, no academic hood should ever have its border divided to represent more than a single degree.

CAPS

1. Material: Serge or worsted stuff, or, for the Doctor's degree only, velvet.

2. Form: So-called mortar-board.
3. Color: Black.
4. Tassel: A long tassel to be fastened to the middle point of the top of the cap only and to lie as it will thereon; to be black except that the Doctor's cap may have its tassel of gold thread. A golden tassel is usually fastened to hang over the left front of the cap. If the tassel is fastened only at the center of the top of the cap, it may lie in any direction with equal meaning, since a passing breeze will determine its position at any time. To move the tassel so that it will hang over the left side of the cap as a feature of the conferment of the Bachelor's degree has no warrant in precedent or in common sense.

The cap is an essential part of the academic dress and is to be retained on the head throughout all academic exercises except during prayer. In particular, the cap is not to be removed at any point in the conferment of a degree.

SOME PERMISSIBLE EXCEPTIONS

1. Members of the governing body of a college or university,—and they only,—whatever their degrees may be, are counted entitled to wear Doctor's gowns (with black velvet), but their hoods may be only those of degrees actually held by the wearers.
2. At ceremonies where degrees are conferred, it is counted proper for a candidate to wear the gown in keeping with the degree to be received, but never to assume the hood of any degree until that degree has been actually bestowed.
3. It has been customary for the holders of certain administrative offices in educational institutions to have their gowns trimmed with gold braid in amount corresponding to the rank of the position held. This usage may be permissible but appears to be losing favor with time.
4. In certain colleges it is provided that only administrative officers who have the Doctor's degree may wear the gold tassel. This usage seems to be declining among the institutions. Not much is to be said in its support.
5. In some large institutions there has developed a local custom of differentiating the graduates by using tassels of

varying colors according to the course taken and by joining two colors in the case of combined courses. Such departures from a strict code may be permissible, but the weight of argument seems to be in favor of simplicity and uniformity in all the details of academic costume.

6. While the best academic form suggests that the appropriate hood should always be worn as an essential part of the academic costume of the holder of any degree, it is customary in most institutions on commencement day for the hood to be dispensed with by those receiving the Bachelor's degree at that time. While this omission is to be regretted, it may be justified on the ground of the considerable expense involved in providing hoods for an entire class when some, at least, of its members may not find occasion to use them again.

7. If graduating classes in secondary schools, academies, normal schools, and junior colleges are to wear caps and gowns of the pattern appropriate to the Bachelor's degree,—a custom perhaps open to question,—it is desirable that neither the cap nor the gown be black, but that both be of some distinctive light color, perhaps gray or blue. In many sections it has become customary for graduating classes of high schools and academies to wear caps and gowns of light gray, while those of many normal schools and junior colleges have adopted light blue.

IN CONCLUSION

While the above statements are designed to describe the best usage in academic dress of the great majority of American colleges and universities of today and to further the same, it is not to be forgotten that persons holding foreign degrees which entitle them to gowns, hoods, and caps unlike those characterized above may wear such costumes with full propriety, and that this code is designed to apply only to *academic* dress, with no reference whatever to the costume worn by representatives of other organizations than colleges and universities.

FREDERICK C. FERRY,
Hamilton College.

April 30, 1935.

Accredited Higher Institutions
1935-1936

THE following list is a compilation as of July 1, 1935, of the lists of the established accrediting agencies; namely, the Association of American Universities, the Middle States Association of Colleges and Secondary Schools, the North Central Association of Colleges and Secondary Schools, the Northwest Association of Secondary and Higher Schools and the Southern Association of Colleges and Secondary Schools.

In the New England Association of Colleges and Secondary Schools, the standards set up for institutional membership are equivalent to those required for accrediting by the other regional associations. Therefore the institutional members of the New England Association are also included in this list.

It will be noted that the five regional associations of colleges and secondary schools just mentioned cover among them the entire United States with the exception of the far southwest. Hence institutions in that region would not appear in the following list unless they appear on the list of the Association of American Universities, which is a national list.

The American Council on Education at its annual meeting May 4, 1935, voted to discontinue the publication of the standards for the several types of higher institutions which were set up by the Council more than ten years ago and which had been recommended to the several accrediting agencies for adoption. It was felt that these standards no longer were indicative of the progressive developments in the accrediting procedure.

ALABAMA

Alabama College, Montevallo
Alabama Polytechnic Institute, Auburn
Birmingham-Southern College, Birmingham
Howard College, Birmingham
Judson College, Marion
Spring Hill College, Spring Hill
State Teachers College, Florence
State Teachers College, Troy
Talladega College, Talladega
Tuskegee Normal and Industrial Institute, Tuskegee
University of Alabama, University
Woman's College of Alabama, Montgomery

ALASKA

Alaska College of Agriculture and School of Mines, Fairbanks

ARIZONA

Arizona State Teachers College, Flagstaff
Arizona State Teachers College, Tempe
University of Arizona, Tucson

ARKANSAS

Arkansas State College, Jonesboro
Arkansas State Teachers College, Conway
Henderson State Teachers College, Arkadelphia
Hendrix College, Conway
University of Arkansas, Fayetteville

CALIFORNIA

California Institute of Technology, Pasadena
Claremont Colleges (Pomona; Scripps), Claremont
College of the Holy Names, Oakland
College of the Pacific, Stockton
Dominican College, San Rafael
Immaculate Heart College, Hollywood
Loyola University, Los Angeles
Mills College, Oakland
Mt. St. Mary's College, Los Angeles
Occidental College, Los Angeles
Pacific Union College, Angwin
San Francisco College for Women, San Francisco
St. Mary's College, St. Mary's
Stanford University, Stanford University
University of California, Berkeley
University of California, Los Angeles
University of Redlands, Redlands
University of Santa Clara, Santa Clara
University of San Francisco, San Francisco

University of Southern California, Los Angeles
Whittier College, Whittier

COLORADO

Colorado Agricultural College, Fort Collins
Colorado College, Colorado Springs
Colorado School of Mines, Golden
Colorado State Teachers College, Greeley
Loretto Heights College, Loretto
University of Colorado, Boulder
University of Denver, Denver
Western State College of Colorado, Gunnison

CONNECTICUT

Albertus Magnus College, New Haven
Connecticut State College, Storrs
Connecticut College for Women, New London
Trinity College, Hartford
Wesleyan University, Middletown
Yale University, New Haven

DELAWARE

University of Delaware, Newark

DISTRICT OF COLUMBIA

American University, Washington, D. C.
Catholic University of America, Washington, D. C.
George Washington University, Washington, D. C.
Georgetown University, Washington, D. C.
Howard University, Washington, D. C.
Trinity College, Washington, D. C.

FLORIDA

Florida State College for Women, Tallahassee
John B. Stetson University, De Land
Rollins College, Winter Park
University of Florida, Gainesville

GEORGIA

Agnes Scott College, Decatur
Atlanta University, Atlanta
Brenau College, Gainesville
Emory University, Atlanta
Georgia School of Technology, Atlanta
Georgia State College for Women, Milledgeville
Georgia State Women's College, Valdosta
Mercer University, Macon
Morehouse College, Atlanta
Shorter College, Rome
Spelman College, Atlanta
University of Georgia, Athens
Wesleyan College, Macon

HAWAII

University of Hawaii, Honolulu

IDAHO

College of Idaho, Caldwell
University of Idaho, Moscow

ILLINOIS

Armour Institute of Technology, Chicago
Augustana College and Theological Seminary, Rock Island
Bradley Polytechnic Institute, Peoria
Carthage College, Carthage
De Paul University, Chicago
Elmhurst College, Elmhurst
Eureka College, Eureka
Illinois College, Jacksonville
Illinois State Normal University, Normal
Illinois State Normal University (Southern), Carbondale
Illinois State Teachers College (Eastern), Charleston
Illinois State Teachers College (Northern), De Kalb
Illinois State Teachers College (Western), Macomb
Illinois Wesleyan University, Bloomington
James Millikin University, Decatur
Knox College, Galesburg
Lake Forest College, Lake Forest
Lewis Institute, Chicago
Loyola University, Chicago
MacMurray College for Women, Jacksonville
Monmouth College, Monmouth
North Central College, Naperville
Northwestern University, Evanston
Rockford College, Rockford
Rosary College, River Forest
Shurtleff College, Alton
University of Chicago, Chicago
University of Illinois, Urbana
Wheaton College, Wheaton

INDIANA

Ball State Teachers College, Muncie
Butler University, Indianapolis
De Pauw University, Greencastle
Earlham College, Richmond
Evansville College, Evansville
Franklin College of Indiana, Franklin
Hanover College, Hanover
Indiana State Teachers College, Terre Haute
Indiana University, Bloomington
Manchester College, North Manchester
Purdue University, Lafayette
Rose Polytechnic Institute, Terre Haute
St. Mary's College, Notre Dame
St. Mary of the Woods College, St. Mary of the Woods
University of Notre Dame, Notre Dame
Valparaiso University, Valparaiso
Wabash College, Crawfordsville

IOWA

Clarke College, Dubuque
Coe College, Cedar Rapids
Columbia College of Dubuque, Dubuque
Cornell College, Mt. Vernon

Decorah Girls' College, Decorah
Drake University, Des Moines
Grinnell College, Grinnell
Iowa State College of Agriculture and Mechanic Arts, Ames
Iowa State Teachers College, Cedar Falls
Iowa Wesleyan College, Mt. Pleasant
Luther College, Decorah
Morningside College, Sioux City
Parsons College, Fairfield
St. Ambrose College, Davenport
Simpson College, Indianola
State University of Iowa, Iowa City
University of Dubuque, Dubuque

KANSAS

Baker University, Baldwin City
Bethany College, Lindsborg
College of Emporia, Emporia
Fort Hays Kansas State College, Hays
Friends University, Wichita
Kansas State College of Agriculture and Applied Science, Manhattan
Kansas State Teachers College of Emporia, Emporia
Kansas State Teachers College, Pittsburg
Marymount College, Salina
Mount St. Scholastica College, Atchison
Municipal University of Wichita, Wichita
Ottawa University, Ottawa
Southwestern College, Winfield
St. Benedict's College, Atchison
Sterling College, Sterling
The St. Mary College, Leavenworth
University of Kansas, Lawrence
Washburn College, Topeka

KENTUCKY

Berea College, Berea
Centre College of Kentucky, Danville
Eastern Kentucky State Teachers College, Richmond
Georgetown College, Georgetown
Morehead State Teachers College, Morehead
Murray State Teachers College, Murray
Transylvania College, Lexington
Union College, Barbourville
University of Kentucky, Lexington
University of Louisville, Louisville
Western Kentucky State Teachers College, Bowling Green

LOUISIANA

Centenary College of Louisiana, Shreveport
Louisiana College, Pineville
Louisiana Polytechnic Institute, Ruston
Louisiana State Normal College, Natchitoches
Louisiana State University, Baton Rouge
Loyola University, New Orleans
Newcomb College, New Orleans
Southwestern Louisiana Institute, Lafayette
Tulane University of Louisiana, New Orleans

MAINE

Bates College, Lewiston
Bowdoin College, Brunswick
Colby College, Waterville
University of Maine, Orono

MARYLAND

College of Notre Dame of Maryland, Baltimore
Goucher College, Baltimore
Hood College, Frederick
Johns Hopkins University, Baltimore
Loyola College, Baltimore
Morgan College, Baltimore
Mt. St. Mary's College, Emmitsburg
St. John's College, Annapolis
St. Joseph's College, Emmitsburg
United States Naval Academy, Annapolis
University of Maryland, College Park
Washington College, Chestertown
Western Maryland College, Westminster

MASSACHUSETTS

American International College, Springfield
Amherst College, Amherst
Boston College, Chestnut Hill
Boston University, Boston
Clark University, Worcester
College of the Holy Cross, Worcester
Emmanuel College, Boston
Harvard University, Cambridge
International Y. M. C. A. College, Springfield
Massachusetts Institute of Technology, Cambridge
Massachusetts State College, Amherst
Mt. Holyoke College, South Hadley
Radcliffe College, Cambridge
Regis College, Weston
Simmons College, Boston
Smith College, Northampton
Tufts College, Medford
Wellesley College, Wellesley
Wheaton College, Norton
Williams College, Williamstown
Worcester Polytechnic Institute, Worcester

MICHIGAN

Albion College, Albion
Alma College, Alma
Battle Creek College, Battle Creek
Calvin College, Grand Rapids
Central State Teachers College, Mount Pleasant
Hillsdale College, Hillsdale
Hope College, Holland
Kalamazoo College, Kalamazoo
Marygrove College, Detroit
Michigan College of Mining and Technology, Houghton

Michigan State College of Agriculture and Applied Science, East Lansing
Michigan State Normal College, Ypsilanti
Northern State Teachers College, Marquette
University of Detroit, Detroit
University of Michigan, Ann Arbor
Wayne University, Detroit
Western State Teachers College, Kalamazoo

MINNESOTA

Carleton College, Northfield
College of St. Benedict, St. Joseph
College of St. Catherine, St. Paul
College of St. Scholastica, Duluth
College of St. Teresa, Winona
College of St. Thomas, St. Paul
Concordia College, Moorhead
Gustavus Adolphus College, St. Peter
Hamline University, St. Paul
Macalester College, St. Paul
St. Olaf College, Northfield
University of Minnesota, Minneapolis

MISSISSIPPI

Blue Mountain College, Blue Mountain
Delta State Teachers College, Cleveland
Millsaps College, Jackson
Mississippi College, Clinton
Mississippi State College, State College
Mississippi State College for Women, Columbus
Mississippi State Teachers College, Hattiesburg
Mississippi Woman's College, Hattiesburg
University of Mississippi, University

MISSOURI

Central College, Fayette
Culver-Stockton College, Canton
Drury College, Springfield
Harris Teachers College, St. Louis
Lincoln University, Jefferson City
Lindenwood College, St. Charles
Missouri State Teachers College (Central), Warrensburg
Missouri State Teachers College (Northeast), Kirksville
Missouri State Teachers College (Northwest), Maryville
Missouri State Teachers College (Southeast), Cape Girardeau
Missouri State Teachers College (Southwest), Springfield
Missouri Valley College, Marshall
Park College, Parkville
St. Louis University, St. Louis
Tarkio College, Tarkio
University of Missouri, Columbia
Washington University, St. Louis
Webster College for Women, Webster Groves
Westminster College, Fulton
William Jewell College, Liberty

MONTANA

Intermountain Union College, Helena
Montana State College, Bozeman
Montana State School of Mines, Butte
Carroll College, Helena
State University of Montana, Missoula

NEBRASKA

Creighton University, Omaha
Doane College, Crete
Hastings College, Hastings
Nebraska State Teachers and Normal College, Chadron
Nebraska State Teachers College, Kearney
Nebraska State Teachers College, Peru
Nebraska State Teachers College, Wayne
Nebraska Wesleyan University, Lincoln
University of Nebraska, Lincoln

NEVADA

University of Nevada, Reno

NEW HAMPSHIRE

Dartmouth College, Hanover
University of New Hampshire, Durham

NEW JERSEY

Brothers College, Madison
College of St. Elizabeth, Convent Station
Georgian Court College, Lakewood
New Jersey College for Women, New Brunswick
Newark College of Engineering, Newark
Princeton University, Princeton
Rutgers University, New Brunswick
Seton Hall College, South Orange
Stevens Institute of Technology, Hoboken

NEW MEXICO

New Mexico College of Agriculture and Mechanic Arts, State College
University of New Mexico, Albuquerque

NEW YORK

Adelphi College, Garden City
Alfred University, Alfred
Bard College, Annandale-on-Hudson
Barnard College, New York City
Brooklyn College, Brooklyn
Canisius College, Buffalo
Clarkson School of Technology, Potsdam
Colgate University, Hamilton
College of the City of New York, New York City
College of Mt. St. Vincent, Mt. St. Vincent-on-Hudson
College of New Rochelle, New Rochelle
College of the Sacred Heart, New York City
College of St. Rose, Albany
Columbia University, New York City

Cornell University, Ithaca
D'Youville College, Buffalo
Elmira College, Elmira
Fordham University, New York City
Good Counsel College, White Plains
Hamilton College, Clinton
Hobart College, Geneva
Hunter College of the City of New York, New York City
Keuka College, Keuka Park
Manhattan College, New York City
Marymount College, Tarrytown-on-Hudson
Nazareth College, Rochester
New York State College for Teachers, Albany
New York University, New York City
Niagara University, Niagara
Polytechnic Institute of Brooklyn, Brooklyn
Rensselaer Polytechnic Institute, Troy
Russell Sage College, Troy
St. Bonaventure's College and Seminary, St. Bonaventure
St. John's University, Brooklyn
St. Joseph's College for Women, Brooklyn
St. Lawrence University, Canton
Skidmore College, Saratoga Springs
Syracuse University, Syracuse
Union University, Schenectady
United States Military Academy, West Point
University of Buffalo, Buffalo
University of Rochester, Rochester
Vassar College, Poughkeepsie
Wells College, Aurora
William Smith College, Geneva

NORTH CAROLINA

Catawba College, Salisbury
Davidson College, Davidson
Duke University, Durham
East Carolina Teachers College, Greenville
Greensboro College, Greensboro
Guilford College, Guilford College
Johnson C. Smith University, Charlotte
Lenoir-Rhyne College, Hickory
Meredith College, Raleigh
North Carolina State College of Agriculture and Engineering, Raleigh
Queens-Chicora College, Charlotte
Salem College, Winston-Salem
University of North Carolina, Chapel Hill
Wake Forest College, Wake Forest
Woman's College of the University of North Carolina, Greensboro

NORTH DAKOTA

Jamestown College, Jamestown
North Dakota Agricultural College, Fargo
University of North Dakota, Grand Forks

OHIO

Antioch College, Yellow Springs
Baldwin Wallace College, Berea
Bowling Green State College, Bowling Green
Capital University, Columbus
Case School of Applied Science, Cleveland
College of Mt. St. Joseph on the Ohio, Mt. St. Joseph
College of Wooster, Wooster
Denison University, Granville
Findlay College, Findlay
Heidelberg College, Tiffin
Hiram College, Hiram
John Carroll University, Cleveland
Kent State College, Kent
Lake Erie College, Painesville
Marietta College, Marietta
Mary Manse College, Toledo
Miami University, Oxford
Mt. Union College, Alliance
Muskingum College, New Concord
Notre Dame College, South Euclid
Oberlin College, Oberlin
Ohio State University, Columbus
Ohio University, Athens
Ohio Wesleyan University, Delaware
Otterbein College, Westerville
St. Mary of the Springs College, East Columbus
University of Akron, Akron
University of Cincinnati, Cincinnati
University of Dayton, Dayton
University of Toledo, Toledo
Ursuline College, Cleveland
Western College, Oxford
Western Reserve University, Cleveland
Wittenberg College, Springfield
Xavier University, Cincinnati

OKLAHOMA

Oklahoma Agricultural and Mechanical College, Stillwater
Oklahoma College for Women, Chickasha
Phillips University, Enid
University of Oklahoma, Norman
University of Tulsa, Tulsa

OREGON

Albany College, Albany
Columbia University, Portland
Linfield College, McMinville
Marylhurst College, Oswego
Mt. Angel College, Mt. Angel
Oregon State Agricultural College, Corvallis
Pacific University, Forest Grove
Reed College, Portland
University of Oregon, Eugene
Willamette University, Salem

PENNSYLVANIA

Albright College, Reading
Allegheny College, Meadville
Bryn Mawr College, Bryn Mawr

Bucknell University, Lewisburg
Carnegie Institute of Technology, Pittsburgh
Dickinson College, Carlisle
Drexel Institute, Philadelphia
Duquesne University, Pittsburgh
Franklin and Marshall College, Lancaster
Geneva College, Beaver Falls
Gettysburg College, Gettysburg
Grove City College, Grove City
Haverford College, Haverford
Immaculata College, Immaculata
Juniata College, Huntingdon
Lafayette College, Easton
LaSalle College, Philadelphia
Lebanon Valley College, Annville
Lehigh University, Bethlehem
Lincoln University, Lincoln University
Marywood College, Scranton
Mercyhurst College, Erie
Moravian College and Theological Seminary, Bethlehem
Mt. St. Joseph College, Philadelphia
Muhlenberg College, Allentown
Pennsylvania College for Women, Pittsburgh
Pennsylvania State College, State College
Rosemont College, Rosemont
St. Joseph's College, Philadelphia
St. Thomas College, Scranton
St. Vincent College, Latrobe
Seton Hill College, Greensburg
Susquehanna University, Selinsgrove
Swarthmore College, Swarthmore
Temple University, Philadelphia
Thiel College, Greenville
University of Pennsylvania, Philadelphia
University of Pittsburgh, Pittsburgh
Ursinus College, Collegeville
Villa Marie College, Erie
Villanova College, Villanova
Washington and Jefferson College, Washington
Westminster College, New Wilmington
Wilson College, Chambersburg

RHODE ISLAND

Brown University, Providence
Pembroke College, Providence
Providence College, Providence
Rhode Island State College, Kingston

SOUTH CAROLINA

Clemson Agricultural College, Clemson
Coker College, Hartsville
College of Charleston, Charleston
Converse College, Spartanburg
Erskine College, Due West
Furman University, Greenville
Limestone College, Gaffney
Presbyterian College, Clinton
The Citadel, Charleston
University of South Carolina, Columbia
Winthrop College, Rock Hill
Wofford College, Spartanburg

SOUTH DAKOTA

Augustana College, Sioux Falls
Dakota Wesleyan University, Mitchell
Huron College, Huron
Sioux Falls College, Sioux Falls
South Dakota State College of Agriculture and Mechanic Arts, Brookings
South Dakota State School of Mines, Rapid City
University of South Dakota, Vermillion
Yankton College, Yankton

TENNESSEE

Carson-Newman College, Jefferson City
Fisk University, Nashville
George Peabody College for Teachers, Nashville
Maryville College, Maryville
Southwestern, Memphis
Tennessee State Teachers College, Johnson City
Tennessee State Teachers College, Memphis
Tennessee State Teachers College, Murfreesboro
Tusculum College, Greeneville
University of Chattanooga, Chattanooga
University of the South, Sewanee
University of Tennessee, Knoxville
Vanderbilt University, Nashville

TEXAS

Agricultural and Mechanical College of Texas, College Station
Baylor College for Women, Belton
Baylor University, Waco
East Texas State Teachers College, Commerce
Incarnate Word College, San Antonio
North Texas State Teachers College, Denton
Our Lady of the Lake College, San Antonio
Prairie View State College, Prairie View
Rice Institute, Houston
Sam Houston State Teachers College, Huntsville
Simmons University, Abilene
Southern Methodist University, Dallas
Southwest Texas State Teachers College, San Marcos
Southwestern University, Georgetown
Stephen F. Austin State Teachers College, Nagadoches
Sul Ross State Teachers College, Alpine
Texas Christian University, Fort Worth
Texas College of Arts and Industries, Kingsville
Texas State College for Women, Denton
Texas Technological College, Lubbock
Trinity University, Waxahachie
University of Texas, Austin
West Texas State Teachers College, Canyon
Wiley College, Marshall

UTAH

Brigham Young University, Provo
College of St. Mary-of-the-Wasatch, Salt Lake City
University of Utah, Salt Lake City
Utah State Agricultural College, Logan

VERMONT

Middlebury College, Middlebury
Norwich University, Northfield
University of Vermont, Burlington

VIRGINIA

Bridgewater College, Bridgewater
College of William and Mary, Williamsburg
Emory and Henry College, Emory
Hampden-Sydney College, Hampden-Sydney
Hampton Institute, Hampton
Hollins College, Hollins
Lynchburg College, Lynchburg
Mary Baldwin College, Staunton
Randolph-Macon College, Ashland
Randolph-Macon Woman's College, Lynchburg
Roanoke College, Salem
State Teachers College, East Radford
State Teachers College, Farmville
State Teachers College, Fredericksburg
State Teachers College, Harrisonburg
Sweet Briar College, Sweet Briar
University of Richmond, Richmond
University of Virginia, Charlottesville
Virginia Military Institute, Lexington
Virginia Agricultural College and Polytechnic Institute, Blacksburg
Virginia State College for Negroes, Petersburg
Washington and Lee University, Lexington

WASHINGTON

College of Puget Sound, Tacoma
Gonzaga University, Spokane
State College of Washington, Pullman
University of Washington, Seattle
Walla Walla College, College Place
Whitman College, Walla Walla
Whitworth College, Spokane

WEST VIRGINIA

Bethany College, Bethany
Concord State Teachers College, Athens
Marshall College, Huntington
West Virginia State College, Institute
West Virginia University, Morgantown

WISCONSIN

Beloit College, Beloit
Carroll College, Waukesha
Lawrence College, Appleton
Marquette University, Milwaukee
Milwaukee-Downer College, Milwaukee
Mount Mary College, Milwaukee
Ripon College, Ripon
State Teachers College, LaCrosse
State Teachers College, Milwaukee
State Teachers College, Oshkosh
State Teachers College, River Falls
State Teachers College, Superior
Stout Institute, Menomonie
University of Wisconsin, Madison

WYOMING

University of Wyoming, Laramie

Teachers' Colleges

CALIFORNIA

California State Teachers College, San Diego
Fresno State Teachers College, Fresno

IDAHO

State Normal School, Albion
State Normal School, Lewiston

MONTANA

Eastern Montana Normal School, Billings
Great Falls Normal School, Great Falls
Montana State Normal College, Dillon

OREGON

Eastern Oregon State Normal School, LaGrande
Marylhurst Normal School, Oswego
Mt. Angel Normal School, Mt. Angel
Oregon Normal School, Monmouth
Southern Oregon Normal School, Ashland

WASHINGTON

Holy Names Normal School, Spokane
Seattle Pacific College, Seattle
State Normal School, Bellingham
State Normal School, Cheney
State Normal School, Ellensburg

Junior Colleges

ALABAMA

Marion Institute, Marion
St. Bernard College, St. Bernard

ARIZONA

Phoenix Junior College, Phoenix

ARKANSAS

Arkansas Agricultural and Mechanical College, Monticello
Arkansas Polytechnic College, Russellville
Central College, Conway
Little Rock Junior College, Little Rock

State Agricultural and Mechanical College, Magnolia

CALIFORNIA

Southern California Junior College, Arlington

COLORADO

Colorado Woman's College, Denver

CONNECTICUT

Junior College of Connecticut, Bridgeport

DISTRICT OF COLUMBIA

Columbia Junior College, Washington, D. C.
Junior College of Georgetown Visitation Convent, Washington, D. C.

FLORIDA

St. Petersburg Junior College, St. Petersburg

GEORGIA

Andrew College, Cuthbert
Fort Valley Normal and Industrial School, Fort Valley
Georgia Southwestern College, Americus
Junior College of Augusta, Augusta
Middle Georgia College, Cochran
South Georgia State College, Douglas

IDAHO

Gooding College, Gooding
Northwest Nazarene College, Nampa
University of Idaho, Southern Branch, Pocatello

ILLINOIS

Blackburn College, Carlinville
Central Y. M. C. A. College, Chicago
Frances Shimer School, Mount Carroll
George Williams College, Chicago
Joliet Junior College, Joliet
La Salle-Peru-Oglesby Junior College, La Salle
Lincoln College, Lincoln
Lyons Township Junior College, La Grange
Monticello Seminary, Godfrey
Morton Junior College, Cicero
North Park College, Chicago
Springfield Junior College, Springfield
The Principia, Elsah
Thornton Junior College, Harvey

INDIANA

St. Joseph's College, Collegeville

IOWA

Graceland College, Lamoni
Mason City Junior College, Mason City
Mt. Mercy Junior College, Cedar Rapids
Ottumwa Heights College, Ottumwa

KENTUCKY

Bethel Woman's College, Hopkinsville
Cumberland College, Williamsburg
Mt. St. Joseph Junior College, St. Joseph
Nazareth Junior College, Nazareth
Pikeville College, Pikeville
Sacred Heart College, Louisville
Sue Bennett College, London

MAINE

Westbrook Junior College, Portland

MASSACHUSETTS

Bradford Junior College, Bradford
Lasell Junior College, Auburndale

MICHIGAN

Bay City Junior College, Bay City
Emmanuel Missionary College, Berrien Springs
Flint Junior College, Flint
Grand Rapids Junior College, Grand Rapids
Highland Park Junior College, Highland Park
Jackson Junior College, Jackson
Muskegon Junior College, Muskegon
Port Huron Junior College, Port Huron

MINNESOTA

Duluth Junior College, Duluth
Eveleth Junior College, Eveleth
Hibbing Junior College, Hibbing
St. Mary's College, Winona
Virginia Junior College, Virginia

MISSISSIPPI

Gulf Park College, Gulfport
Harrison-Stone-Jackson Junior College, Perkinston
Hinds Junior College, Raymond
Holmes County Junior College, Goodman
Pearl River College, Poplarville
Sunflower County Junior College, Moorhead
Whitworth College, Brookhaven

MISSOURI

Christian College, Columbia
Flat River Junior College, Flat River
Jefferson City Junior College, Jefferson City
Junior College of Kansas City, Kansas City
Kemper Military School, Boonville
Rockhurst College, Kansas City
St. Joseph Junior College, St. Joseph
Stephens College, Columbia
Teachers College of Kansas City, Kansas City
Wentworth Military Academy, Lexington
William Woods College, Fulton

MONTANA

Great Falls Junior College, Great Falls
Junior College of Billings Polytechnic Institute, Billings
Northern Montana College, Havre

NEBRASKA

Union College, Lincoln

NEW HAMPSHIRE

Colby Junior College for Women, New London

NEW JERSEY

Centenary Collegiate Institute, Hackettstown

NEW YORK

Packer Collegiate Institute, Brooklyn
Sarah Lawrence College, Bronxville
Seth Low Junior College, Brooklyn

NORTH CAROLINA

Barber-Scotia Junior College, Concord
Mars Hill College, Mars Hill
St. Mary's School, Raleigh

OKLAHOMA

Northeastern Oklahoma Junior College, Miami

OREGON

St. Helen's Hall Junior College, Portland

PENNSYLVANIA

Williamsport-Dickinson Seminary, Williamsport

TENNESSEE

Tennessee Wesleyan College, Athens
Ward Belmont School, Nashville

TEXAS

Amarillo College, Amarillo
Brownsville Junior College, Brownsville
Edinburg College, Edinburg
John Tarleton Agricultural College, Stephenville
Lamar College, Beaumont
Lon Morris College, Jacksonville
Paris Junior College, Paris
Schreiner Institute, Kerrville
Texarkana Junior College, Texarkana
Tyler Junior College, Tyler

UTAH

Dixie Junior College, St. George
Snow College, Ephraim
Weber College, Ogden

VERMONT

Green Mountain Junior College, Poultney

VIRGINIA

Averett College, Danville
Sullins College, Bristol
Virginia Intermont College, Bristol

WASHINGTON

Seattle College, Seattle
St. Martin's College, Lacey

WEST VIRGINIA

Potomac State School, Keyser

WISCONSIN

St. Norbert College, West De Pere

The Educational Record

Published Quarterly by

The American Council on Education

Editor: George F. Zook

Volume 16 October, 1935 No. 4

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AMERICAN COUNCIL ON EDUCATION

Annual Subscription, $2.00
Entered as second-class matter June 8, 1932, at the Post Office at
Washington, D. C., under the act of August 24, 1912

Examinations Old and New: Their Uses and Abuses

I. A BACKWARD GLANCE

AS FAR back as we have any record of school routines, teachers have always examined or tested, as well as taught. But our attitudes towards these two functions have been, historically, quite different. We have long understood that teaching is a highly skilled business, a profession, calling for special aptitudes and extensive preparation, and that both its techniques and its objectives are worthy of the most careful investigation. But examining or testing we have taken for granted as something that anybody could do any time, quite casually, for any purpose he might happen to think of. It is only yesterday that it occurred to most of us that there might be skilled techniques of testing or that the uses we were accustomed to make of our tests and examinations might be open to question.

Every teacher or administrator of more than twenty years' service will recall with me that Age of Innocence when a "test" regularly consisted of ten questions, sometimes concocted impromptu as we wrote them on the blackboard, each weighted, by our arbitrary personal fiat, with a value of 10 on a scale of 100, and when the perfectly simple purpose of any "test" was to "pass" or "flunk" the testees. We knew no qualms in those days about reliabilities or validities or comparability, and the sigma lay as far in the future (for us teachers) as television.

It was only after the World War that this primal innocence was disturbed by the coming—into the consciousness of teachers generally, as distinguished from the psychologists—of what many of us still think of as "the new tests." A bewildering series of strange inventions: intelligence tests first, and then objective achievement tests, and aptitude tests, and interest tests, and personality inventories and ratings. Nearly all of them appallingly elaborate; and alleged to have been most laboriously prepared, with every item studied and checked, and to have been tried out on hundreds or thousands of students, and then re-studied and re-checked by mysterious statistical methods. Moreover, none of them came equipped with any Passing Grade—an omission which was at first both incomprehensible and shocking. Instead they yielded at best Percentile Ranks, which seemed very inconclusive and unsatisfactory.

But worst of all was the doctrine taught about the *use* of the new tests. It was dinned in upon us that each one of them professed to measure only some one special thing, and that it was by no means certain that it really measured even that, and that in any case it was not reliable for individuals but only for sizable groups, unless something called the Reliability Coefficient was at least as high as .90, which it almost never was.

All this laboriousness and caution inevitably disturbed our blithe serenity with respect to the old kind of examinations. We could not but realize that our procedures with them were somewhat cavalier. We were driven to ask what it was they measured, and with what reliability, and were not able to answer either of those questions. We even began to lose our ancient faith in the Passing Grade. We recalled various well-known facts which we had previously regarded as negligible or humorous: that the distribution of grades in different departments, or even for different teachers in any one department, in any school or college, varies greatly; that students seeking scholastic honors, or merely promotion, believe they can achieve their ends better by choosing "easy" teachers than by burning the midnight tungsten; that cases have been reported where the same examination paper, independently marked by two different instructors, has been given an honor grade by one instructor and a failing grade by the other. In the light of the new tests and test procedures, and the high seriousness and scientific precision of the new testers, such facts began to seem less amusing—began indeed to appear quite appalling when we reflected that promotion all through the schools and admission to college and graduation from college and election to Phi Beta Kappa and admission to professional schools, nay, even professional licensure, depend upon accumulations or averages of such measures.

But what should we do about it? Throw over our old examinations and adopt the new tests instead? But the new tests have no Passing Grade! They violently disclaim any sure reliabilty for the individual case. How, then, can they serve as the basis for promotion and graduation and honors and the rest? Which is what we give examinations for. Or is it? *Why do we give examinations anyway?* Do we give them rightly or wrongly? And do we use their results rightly or wrongly?

In the foregoing paragraphs I have attempted to sketch rapidly the experience with the old and new kinds of examinations through which the rank and file of teachers and administrators—who are not testing experts—have passed during the last fifteen or twenty years, and to indicate the state of mind in which a great many of us now find ourselves; which is one of uncertainty and questioning, not only as to the comparative merits of the old and the new tests, but as to the right and wrong use or uses of examinations or tests of any kind. Most of us are still giving our old examinations, but now we give them dubiously and dare not trust their results. Also, we are constantly beset with new tests and testing programs, which we sometimes reject and sometimes accept, without very good reasons either way. We have no clear leading as to how to test or when to test or why to test. We need, to replace our old faith, a new philosophy of tests and examinations, dealing especially with the right use of such instruments and their wrong uses or abuses.

It is the purpose of this paper to attempt such a philosophy—to formulate, tentatively at least, some clear doctrine as to the right use of examinations, whether old-type or new-type.

To this end I shall review the various uses which we do actually make of examinations and tests, with such appraisal of these uses as might naturally occur to anyone who gave critical thought to the matter. Perhaps when we have finished such a survey we shall see more clearly where we are and where we want to go, what we have been doing and what we ought to do.

II. KINDS OF EXAMINATIONS

It may be well to begin by summarizing the *kinds* of examinations we now have to confront. Classifying by what it is sought to measure in each case, we find at least five kinds:

1. ACHIEVEMENT TESTS. These include: (*a*) the old *essay-type examinations;* (*b*) *problem-type examinations,* used from of old in courses in mathematics and some other subjects; (*c*) *oral examinations,* which have long been in vogue in connection with doctoral dissertations and have recently come to play a part in the Comprehensive Examinations now required for honors or for graduation at many colleges; and (*d*) *objective achievement tests* (new-type), of which the tests prepared by the Cooperative Test Service and those used in the Iowa Every-Pupil Contest may serve as examples.
2. GENERAL INTELLIGENCE TESTS, e.g., the Binet-Stanford and Otis tests.
3. APTITUDE TESTS, e.g., the Scholastic Aptitude Test given by the College Entrance Examination Board, the American Council on Education Scholastic Aptitude Test, the Seashore Measures of Musical Talent, etc.
4. INTEREST TESTS, of which the Strong Vocational Interest Test is probably the best known.
5. PERSONALITY INVENTORIES AND RATINGS, of many kinds, as different as the Bernreuter Personality Inventory and the Trait Study recently devised by Dr. Eugene Randolph Smith's committee, working under the Progressive Education Association's Commission on the Relation of School and College.

It will be seen at once that of these five kinds of examinations the last four are new, having made their way into schools and colleges within the last twenty years. For these four kinds it can hardly be said that we have as yet found any general, commonly accepted, institutionalized use or uses. So far most of us have handled these tests and their results very informally; the scores or rankings have served as clues or cues for personnel officers in conferences with advisees, but have been entered on official records only as *obiter dicta* if at all. This situation is probably due in part to the fact that we have hardly had time as yet to assimilate these new measures into our old routines, but partly also to the nature of these tests and their results, which (happily) do not lend themselves readily to the kind of uses we have been accustomed to make of examinations.[1]

It follows that my proposed survey of the uses of examinations will be concerned almost wholly with the first kind, namely, achievement tests. And under achievement tests we shall really be dealing chiefly with the essay-type, since we may safely guess that 90 per cent of our actual examining still employs that type; with some help from problem-type and oral examinations (which are only auxiliary variants of the essay-type), and with still limited but rapidly growing use of the new-type objective achievement test.

III. ACTUAL USES OF EXAMINATIONS

When one begins to meditate upon the achievement tests, old and new, which are actually given in schools and colleges, one can hardly fail to be astonished by their multiplicity—by the sheer quantity of examining in which we are engaged. The following list makes no attempt to be exhaustive: daily quizzes and weekly quizzes and monthly quizzes, at all levels; semester examinations and year examinations, at all levels; college entrance examinations; comprehensive examinations for promotion to the senior college and for graduation or honors; master's and doctoral examinations; and professional licensing examinations (for lawyers, teachers, physicians, dentists, pharmacists, nurses, opticians, veterinarians, midwives, barbers, stationary engineers, etc., etc.). Again we are impelled to ask, Why do we give such countless tests?

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[1] The beginnings of a general, institutional use of aptitude test results may be found in the regular figuring of such results into a general predictive index—"Bogie" at Princeton, "General Prediction" at Yale, "College Aptitude Rating" at Minnesota. See A. B. Crawford, "Aptitude Testing in Personnel Procedure," *Bulletin of the American Association of Collegiate Registrars,* July, 1934; and J. B. Johnston, "*Advising College Students,*" *Journal of Higher Education,* June, 1930.

Probably many persons will answer immediately that the obvious and legitimate purpose of practically all this achievement testing is the *maintenance of standards;* which seems to mean either one or both of two things: the imposition and enforcement of a prescribed curriculum, or the enforcement of some minimum degree of attainment.

Upon reflection it is likely to be added that a second, closely related purpose is *selection,* involving also rejection—the segregation of the fit from the unfit, the sheep from the goats, for some particular purpose.

And in the literature on the subject we find still other purposes cited as supplementary or in some cases primary. It is said that examinations—

Provide a powerful *incentive to study;*
Constitute a *method of instruction;*
Stimulate or even enforce *improvement of teaching;*
Afford a basis for the *appraisal of teachers and departments;*
Provide possible assistance in the *accrediting of schools and colleges;*
Furnish data for *educational guidance;*
And accumulate *materials for research!*

This is certainly a notable miscellany of objectives, many of them possessing obviously very great social importance. We are fortunate indeed if all or any of them can be adequately served by series of measurements the great majority of which are of unknown and highly dubious validity and reliability. But let us consider these several purposes or uses one by one with such comments as may seem appropriate.

IV. STANDARDS-ENFORCEMENT

First, the *maintenance of standards,* including, as already noted, the enforcement both of prescribed subject matter and of some more or less definitely envisaged degree of attainment.

If one is to raise any objections here, he must tread softly, because he is approaching what is to many educators in service, especially many of the older ones, the Ark of the Covenant. When those of us who are now in our forties and fifties were learning our trade, "Standards" was the great word, the new gospel, in American education. To set Standards, and enforce Standards, and raise Standards, and raise them evermore, was nearly the whole duty of teachers and principals and presidents. Let me confess that I learned that gospel in my first job, from men who were leaders in their generation, and that for twenty years I never doubted that it contained practically everything needful for educational salvation.

And please note it was a real and salutary gospel in its day. For American education in the nineties was a variegated hodgepodge of uncoordinated practices, which had never undergone any scrutiny from anyone, and many of which were shoddy, futile, and absurd beyond anything we now conceive of; and the Age of Standards—as the period from 1890 to 1915 may come to be called—brought some order out of that chaos, eliminated many dishonest schools and incompetent teachers, and vastly improved equipment, curricula, and methods. This should not be forgotten.

But it is easy to see now that the gospel of standardization was based in part on a tacit, uncriticized, and unwarranted assumption: the assumption, namely, that all men and particularly all children are equal and alike, or nearly equal and nearly alike, not only in their right to Life, Liberty, and the Pursuit of Happiness, as the democratic doctrine declares, but also in kind and degree of intelligence and capacity. In short, we quite overlooked the little matter of Individual Differences—of which, in fact, little or nothing was heard thirty and forty years ago. And we who were making the Standards were, of course, educators, automatically selected in the main on the basis of considerable scholastic or bookish aptitude. Quite naturally (and quite unconsciously) we created our Standards in our own image. We provided for such equipment and curricula and methods as would have been fine for us when we were in school, and prescribed such degrees of attainment as we should triumphantly and joyfully have met if they had been set for us. And all this was excellent and greatly beneficial for that part of the oncoming generation which was like us. But we entirely missed the fact that the great majority of the children in schools, and even a substantial minority of the undergraduates in colleges, were not at all like us, but were endowed with quite other kinds of capacity and often with lesser degrees of capacity of any kind.

For those others—the majority!—our generalized uniform Standards were all wrong, in that they gave exclusive sanction and exclusive prestige to tasks which were unsuited to their kinds of capacity or impossible for their degrees of capacity or both. As a consequence, the Standards have caused, and are now causing, untold damage and untellable misery to vast numbers of children in the elementary schools and high schools and even in colleges, thwarting and warping and beating down young lives.

We vaguely imagined that in providing and enforcing substantially the same kind of instruction for all children we were serving the democratic principle already cited: Life, Liberty, and the Pursuit of Happiness for everybody. But in fact our uniform and exclusively intellectual Standards have deprived a majority of our pupils of the last two of those rights.

In extreme cases children are provoked—by our Standards indirectly—to unsocial rebellion. Senator Copeland has recently emphasized the hideous fact that the present average age of criminals in this country is 23, with the largest age group at 19 and the next largest at 18, and has very gently but plainly brought home a partial responsibility for this situation to the schools and their Uniform Standards.

"The reports of all school systems that have come to my notice," he writes, "reveal an appallingly large number of academic 'failures' in every grade year after year. Authentic testimony indicates that many if not most pre-delinquents are found in these 'failing' groups. Are these failures inevitable, or are they due largely to the fact that our curriculum is still so rigid that many of our pupils are confronted with academic tasks which are beyond their abilities, irrelevant to their interests and needs, and which foredoom them to what our inflexible academic standards call 'failure'?"[2]

We did not foresee when we made up our beautiful Standards and proceeded to enforce them so firmly that we were about to contribute to a wave of juvenile crime! But even worse, because much more widespread, is the less lurid effect on the vast masses of children who are not driven to crime but only to partial frustration, discouragement, futility, boredom, and various kinds of "escape"—into daydreams or into frivolous and unsatisfying distractions outside of school hours.

In sum: the principle of Standards was a thesis which overlooked an equally valid antithesis, the principle of Individual Differences. In the dialectic of educational history that antithetical principle has now come to the fore, and we are forced to construct a synthesis that shall embody the valid aspects of both principles. And since examining has played a major part in the enforcement of Standards, some wiser use of examinations may be vital to the working out of our new synthesis.

Can we indicate briefly what the new synthesis is likely to be, and what kind of examining we shall need in connection with it?

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[2] "Education and the Prevention of Crime," address delivered at the meeting of the Department of Superintendence, National Education Association, Cleveland, Ohio, February 28, 1934; published in THE EDUCATIONAL RECORD, April, 1934. This address was based in part on the investigation of crime and racketeering conducted by a Senate committee of which Dr. Copeland is chairman. Out of the same investigation has come the Washington Experiment in Character Education, described by Superintendent Frank W. Ballou at the Third Educational Conference, New York City, November 1, 1934; Dr. Ballou's address has been published in the *Report of the Third Educational Conference*, American Council on Education, 1935.

As has already been emphasized, Standards—meaning bookish standards and high bookish standards—are fine for those for whom they are fine: for boys and girls and young men and women possessing a superior degree of scholastic or bookish ability. Our grievous error in this matter of Standards was merely that we conceived of a single standard uniformly applicable to the whole school population.

Plainly, then, what we need is *more* standards: many highly differentiated and carefully graded standards, adapted to as many kinds of capacity and to as many levels of attainment as we can identify in the children actually in our schools. Each of the new differentiated standards would naturally—like our present Standards—carry its appropriate prescription or indication of subject matter or kind and method of instruction and its own norms of excellence. All should be given equal sanction, and to each should be accorded its appropriate prestige. Thus, and thus only, shall we succeed in bringing to all children those benefits—first-rate facilities and feasible goals and successful and happy attainment—which our old Uniform Standards sought to bring to all but have actually brought only to one limited group, namely, those who are in some degree bookishly superior.

For the stimulation of achievement and the demonstration of success within each of our new differentiated standards, we shall undoubtedly use appropriately differentiated achievement examinations, both old-type and new-type—though for this delicate business our tests will certainly have to be more carefully constructed for greater reliability than most of our essay-type examinations have had in the past.

But it becomes clear upon very brief reflection that the major rôle of examining in any such set-up will be a new one: not that of determining, at the end of an educational process, whether a common goal has been attained, but rather of discovering, at the beginning of the process and at various points throughout, what different goals should be aimed at.

In short, under a differentiated educational system, adapted to all classifiable kinds and degrees of individual differences, the old major rôle of examinations—the maintenance of standards—will remain, but will become minor. The emergent major rôle of examining is clearly *guidance;* in which process we shall employ both achievement tests and all those other, new kinds of tests (of general intelligence, special aptitude, interest, and personality) for which, as noted above, we have been unable so far to find any very clear use in schools. We can see now that the reason we have been unable to make much use of these other tests is that even when we have their results and recognize those results as valid in the individual case we can seldom, under our present rigid system, do anything about them, so far at least as school programs are concerned.

V. JUSTIFIABLE AND NON-JUSTIFIABLE STANDARDS-ENFORCEMENT

But where does this analysis of the standardizing use of achievement examinations lead us with respect to the appropriateness and rightness of those parts of our present vast examining process in which the maintenance of standards is clearly the major purpose?

It leads us, I think, to justification of some of these items, with some qualifications, and to equally plain condemnation of others.

The clearest case for justification is probably the professional licensing examination, for lawyers, teachers, physicians, and all the way down to midwives and barbers. In such examining we are not concerned primarily with education and the welfare of the individual, but with the protection of society against incompetence and malpractice. Accordingly, such examinations may properly prescribe appropriate subject matter and skills and enforce high standards of attainment; and the standards may well be raised ever higher, as fast as the development of the professions requires and the resources of society permit.

But even here there are two qualifications to be noted:

First, that a high rate of failure in bar, medical, or other professional examinations, such as often prevails, is not a cause for satisfaction but a symptom of gross maladjustment in the system as a whole. This is not to suggest that the candidates who fail should be accepted; it is more likely that an appreciable number who "pass" should be rejected. But it is to suggest that the incompetence of nearly all the failures should have been discovered long before they reached the professional examination and the candidates steered into other fields—not encouraged or permitted to waste their time and money in prolonged preparation for such final defeat. The unsuccessful candidate in a bar examination, for example, has commonly had nineteen years of general and special schooling. What blank ignorance of our students or bland unconcern with their purposes and welfare is revealed by the fact that through nearly two decades nobody noticed that he lacked the capabilities to make a lawyer, or, having noted this circumstance, concerned himself with it! Such an example may serve to drive home the need for the new emergent function of examining, namely, guidance.

Secondly, I am told by experts in testing that no single examination or brief series of examinations which they have ever devised or expect ever to succeed in devising attains anything like full reliability for individual cases. If this be so, it would appear that the weight put upon many professional examinations is more than they ought to bear, scientifically or equitably. It does not follow that such examinations ought not to be given, but it does seem to follow that their results should be used, to a larger extent than at present, in connection with other accumulated evidence of the candidates' qualifications and competence. We shall have occasion to return to this point.

What has been said above in justification of the selective, standards-maintaining function of professional licensing examinations may be predicated also, *with the same qualifications*, of examinations for admission, promotion, and graduation in professional schools, whether graduate or undergraduate. In these cases also the public interest must be paramount.

On a somewhat different basis a similar justification must be conceded to the endowed colleges and to private secondary and elementary schools. Any such school or college has a clear legal and moral right to choose the clientele it wishes to serve and to offer its facilities to that group only—only, for example, to the bookishly superior. And, having so chosen, any such school or college may properly make use of selective, standards-maintaining examinations in connection with admission, promotion, and graduation. The process of selective admission especially, in such cases, is in fact a process of educational guidance: guiding into the institution those who may be expected to profit by its facilities, and guiding away—if this be not too sardonic a euphemism for rejection—those who cannot be expected to be successful in the kind of work that is offered.

There is, however, a heavy responsibility upon any such institution to see to it that its selective, standards-maintaining procedures shall have the highest possible reliability for the individual case; because every time those procedures slip serious damage is done to the student victim of the unreliability. Every one knows that at present the reliability of these procedures is grievously low. The fact that of the students admitted to colleges in any September only about one-half will be graduated four years later is evidence on this point. (Of course a number drop out for unforeseeable, non-academic reasons—ill-health, financial difficulties, and the like; but the residue who are ejected or leave voluntarily because they are misfits is very large.) This situation is clearly due to the fact that admissions (whether by College Board examinations, or Regents' examinations, or entrance examinations given by the individual college, or certificate) are based on too little evidence *and* that retention or ejection after admission is also based on too little evidence—in both cases on a very few measurements of low reliability. As a result, even the sacred business of maintaining standards is botched, because of taking too little trouble, because we rely on evidence that no testing expert would accept as valid. And both the guidance function of the admissions procedure, which should be its primary aspect, and educational guidance after admission are almost ignored—are in fact nearly impossible because of inadequate data. A suggestion for a more adequate method of admissions (a better maintenance of standards!), serving also as a basis for educational guidance within the college, will be developed in a later section of this paper.

When we come to the schools (of every level) which are supported by public taxation, the legal and moral situation becomes entirely different, and *uniform* standards-enforcing examinations must plainly be condemned. These schools are maintained—as so many orators have boasted—to provide education "for all the children of all the people." And we do not do that by setting up Uniform Standards and standards-enforcing examinations, based upon tasks which are useful and goals which are feasible for only one limited kind and degree of capacity, and—through the agency of such examinations—"flunking," demoting, or retarding all other kinds and degrees. It seems clear that we cannot make further progress in our public schools, elementary and secondary, towards a really democratic education or a really effective education for citizenship until we are prepared to set up a multiplicity of differentiated standards, as suggested above. For really democratic public education must be the exact opposite of the fallaciously democratic uniform education we have heretofore sought to impose.

The category of public education includes, of course, the tax-supported state universities and state colleges. These institutions commonly feel themselves to be in a cruel dilemma in the matter of Standards. They are practically all required by law, or by public opinion which would quickly crystallize into law if flouted, to admit all or substantially all graduates of the public high schools of the state—a group which obviously includes varying kinds and degrees of capacity. On the other hand, their administrations and faculties usually hold, with almost religious fervor, that they must uphold Standards—meaning uniform, high, bookish standards—comparable to those of the great endowed universities.

The practical solution of this *impasse* which some of them have adopted is to receive nearly all comers, as required by law or public opinion, but to effect, shortly after admission, a wholesale elimination, by maintaining in the college course—through the agency, largely, of examinations and quizzes—Standards which the "non-college material" cannot meet. This is one of the most brutal and indefensible procedures that any type of education has ever sponsored.

And the dilemma which has led to it exists only in the minds of faculties and administrations. By what commandment—other than that of blind imitativeness and conformity—are they required to maintain *for all their students* the kind of Standards that the endowed universities, with their entirely different obligations and responsibilities, have set up?

Certainly a state university should give courses and curricula designed for young people of superior bookish ability, of whom they receive a considerable number, and in those courses and curricula they should maintain Standards second to none; and they must maintain in their professional schools (both graduate and undergraduate) the standards which the respective professions demand; but clearly they should receive into such curricula and schools only those students who have the requisite kind and degree of capacity; and there is no reason why in their huge organizations they should not provide other courses and curricula definitely adapted to other kinds and lower degrees of capacity, in which appropriately differentiated and lowered standards of attainment should be set. They will not be doing a humane or honest job until they either effect such differentiation or else obtain legislative approval for genuinely selective admission and enforce such admission.

So far as I know there is just one state institution which has looked this problem in the face and made progress towards its solution; namely, the University of Minnesota, in the establishment of its General College, embodying this principle of differentiation of offerings and standards.[3]

VI. EXAMINATIONS AS AN INCENTIVE TO STUDY

One survey of the first (or really the first two) uses ordinarily assigned to achievement examinations, namely, the maintenance of standards and selection, has taken us over considerable ground; but this may be proper enough since these related functions are undoubtedly the dominant ones in most current examining. The other alleged uses may be much more briefly reviewed—with one exception.

The third utility of examinations listed earlier in this article was, it may be remembered, that of providing *an incentive to study*.

This point has been conclusively disposed of by Mrs. Eleanor Perry Wood:

> "There is little doubt that students are frequently, if not always, stimulated to greater efforts by examinations, but it is a question whether very many receive any genuinely educational motivation from the examination experiences which they have under the present system. On the contrary, we are all aware of the fact that many students are stimulated and provoked to types of conduct and of habits which are not only uneducational, but in some instances morally as well as intellectually negative. Genuine educational motivation is a compound of the individual pupil's abilities and effective interests, and no motivation can long persist which is not fed by consciousness on the part of the student that what he is doing is significant, and that he is doing it with visible success and with satisfaction to himself." [4]

Putting the matter another way: an examination may constitute a minor, temporary incentive of real educational quality in cases where the student's task is congenial to his interests and capacities; it provides an occasion for review and summation and a pleasing opportunity for the demonstration of success to himself and his teachers. But what I have elsewhere called the "policial quiz," designed to enforce at least periodical industry upon unwilling students, can result only in "cribs"—very few of them technically dishonest, in the form of notes brought in; nearly all of them in the students' heads, where they have been "crammed" the night before. Morally there is supposed to be a vital distinction between these external and internal "cribs," but so far as effective learning goes there is no substantial difference: in either case the student knows practically nothing about the course a few hours after he leaves the examination room.

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[3] See J. B. Johnston, *Education for Democracy*, University of Minnesota Press, 1934, especially Chapter VI, "New Demands for Differential Treatment of Students in the College of Liberal Arts," and Chapter VII, "The Development of Differential College Curricula."

[4] Eleanor Perry Wood, "Examining the Uses of Examinations," *Harvard Teachers Record*, April, 1933.

VII. EXAMINATIONS AS A METHOD OF INSTRUCTION

A fourth utility attributed to examinations is that they constitute *a method of instruction.*

An impressive phrase; but in many cases where it is used one finds it difficult to give it specific content. In some instances it seems to refer to the incentive-to-study idea already discussed; particularly to the idea that an impending examination may stimulate students to summarize and organize considerable bodies of material covered over a period of weeks or months. It has been granted above that this may be an incidental value of examinations for students who are well placed in the work they are doing.

In other cases the idea seems to be that through examination papers, corrected and returned, students may be apprised of gaps in their knowledge or errors in their thinking, which is certainly true. But unfortunately the great bulk of essay-type achievement tests are so meager in their sampling that the assistance thus afforded to the student is extremely incomplete and random. A considerable number of other gaps and errors which he might have revealed, if he had had what he would have called the bad luck to be asked other questions, are not brought to his attention. Moreover, when the primary purposes of an examination are those of standards-enforcement and selection (i.e., passing or failing), the psychology of the situation is against much realization of this learning value. The student is likely to regret a mistake not because of the gap revealed in his fabric of knowledge but because of the 10 per cent cut from his grade. And since the 10 per cent is irremediably gone, why bother much about the gap?

It seems to follow that where it is really desired to use examinations as a method of instruction—where, in other words, this idea is more than a rationalization—the examinations should be given definitely and exclusively for this purpose and should be emphatically dissociated from standards-enforcement; that is to say, they should be corrected but not graded; or, if they are graded, it should be most explicitly understood that the grades are solely for the students' own information as to their measure of attainment and will not be recorded or used in any way in connection with passing, promotion, honors, eligibility, or the like. Any teacher who sets out to use tests in this way is likely to find himself modifying his examination papers considerably with respect to scope and type of sampling, and will encounter also a startling metamorphosis in the attitude of his students towards examinations; he will find that they actually relish tests of this kind as interesting and helpful occasions.

This has been the experience of scattered teachers in various schools and colleges who have occasionally experimented with this kind of testing; and it has recently been demonstrated on a large scale under the New Plan at the University of Chicago, as reported in Dean Boucher's new book, in which a number of instances are given and are summarized as follows:[5]

"Though the official Board examinations [for promotion to the Senior College and for graduation] are the only required examinations, it was agreed when the New Plan was adopted that reviews, tests, quizzes, and examinations of various types should be given at times and in amounts as needed to attain desired educational results, the need to be determined by faculty and student judgments in the light of experience as each course progressed. Interestingly enough, in not a few courses students have asked that examinations be given more frequently than the instructors thought necessary to acquaint both students and instructors adequately with the rate and degree of progress being made by the students. The tendency is to accede to student requests in such instances. In more than one instance at the end of the Autumn and Winter quarters, after several instructional tests have been given during the quarter upon the conclusion of logical units of work, it has been left to student vote to determine whether a final examination on the entire quarter's work should be given. In every such instance the students have asked for the examination, though they knew that the result would have no officially recorded effect upon their attainment of the junior-college certificate. They did know, however, that the examination papers would be carefully corrected and returned, and would thus serve as an excellent instructional aid in their endeavor to master as much of the field as possible in preparation for the official Board examinations."

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[5] Chauncey Samuel Boucher: *The Chicago College Plan,* University of Chicago Press, 1935, pp. 115, 116.

Here we have the real thing in the use of examinations as a method of instruction, with the necessary complete dissociation from the standards-enforcement function; which function is taken care of separately at Chicago by the official Board examinations.

VIII. DO EXAMINATIONS CONDUCE TO IMPROVEMENT OF TEACHING?

Next we may consider the value of examinations as a means of stimulating or enforcing *improvement of teaching.*

This idea also seems to have diverse meanings in different mouths. Where it is invoked in connection with such procedures as those of the College Entrance Examination Board and the New York Regents it seems to mean that through the agency of centralized examinations teachers have been led to select materials of instruction which are deemed desirable, to cover a desiderated amount of such materials, and to be thorough and meticulous in their work, or at least in such aspects of it as will contribute to a good showing in the examinations. But improvement of teaching in this sense is obviously synonymous with the enforcement of standards; which objective or use of examinations has already been discussed with some fullness—except for one point, which is highly relevant under this heading.

That point is the contention of a considerable number of teachers, especially those of the Progressive persuasion, that standards-enforcing examinations, far from contributing to the improvement of teaching, lead to its deterioration; that they force teachers into patterns of routine, compel them to ignore individual differences in their students, kill their spontaneity and initiative, and above all cause them to concentrate on factual material, mere information (to be used in passing the examinations), to the neglect of the vital goals of education, such as growth and power and understandings and appreciations and socialized attitudes.

In my own view there has been historically considerable basis for this objection. Certainly a great many teachers who have taught under the College Board system or the New York Regents' system are wont to proclaim it loudly. From this point of view the item Improvement of Teaching should be stricken from the list of the uses of examinations, and we should set up a new list of *disutilities* of examinations, headed, perhaps, with the item Stultification of Teaching.

Nevertheless it is perfectly clear that we are not going to abandon examinations. They are necessary instruments of too many important educational and social purposes. Accordingly, the best we can do is to minimize as far as possible this aspect of disutility. It will be noted that this aspect inheres chiefly in the standards-enforcing and selective uses of examinations. It does not appear at all, for example, in their genuine, separate use as a method of instruction, nor yet in the remaining major use of examinations, already suggested and to be discussed below, namely, guidance. Moreover, it will tend to disappear, even in connection with standards-enforcing examinations:

1. As such examinations become more comprehensive, covering larger areas, with more freedom allowed. (The old charges are seldom if ever brought against the College Board's new "English Comprehensive.")
2. If and when we set up a multiplicity of differentiated standards in place of our present Uniform Standards.
3. As we come to use the results even of standards-enforcing examinations less as isolated measures and more in connection with accumulated records of the students' capacities and previous achievements.

IX. THE APPRAISAL OF TEACHERS AND DEPARTMENTS

School and college administrators have long played with the idea that a study of examination results—of the distribution of the grades given by different instructors—might be made to yield some evidence of the comparative teaching effectiveness of the members of their staffs. In the past this idea has usually been abandoned after brief consideration because of the notorious lack of comparability of the old essay-type examinations; but with the advent of the objective and standardized new-type tests it recurs very temptingly.

It is tempting for perfectly legitimate reasons. In the elementary and secondary schools it has been recognized all along that teaching effectiveness should be the principal criterion in the selection, retention, and promotion of teachers; hence a pressing administrative need for measures of pedagogical success much more definite and objective than any we have ever had. Even college and university presidents have admitted the importance of this criterion, and have avowed that they would make use of it more than they do if it could be as definitely appraised as administrative effectiveness or activity in research. And beyond this all experiments looking to the improvement of teaching processes must be somewhat inconclusive until we can have reliable, comparable measures of results.

It does seem possible that in time methods of realizing this highly desirable theoretical utility of comparable tests may be worked out. But it is clear also that for the present any procedures in this direction should be entered upon with caution and watchful skepticism and should be regarded as experimental. No simple comparison of the percentile rankings of the same students in different courses, for example, or of the average or median scores of different classes in the same course, will yield safe interpretations, no matter how objective and reliable the test or tests may be. We must await the development of controls and techniques as yet only partially envisaged.

Some of the items which will enter into an eventual technique can, of course, be foreseen. One such item will undoubtedly be the checking of achievement test results against intelligence test scores; this procedure is already generally followed, and obviously increases the reliability of measurement or indication of probable effectiveness of instruction. As we come to have a larger number of special aptitude tests, a check of achievement test results against specific aptitude scores, as well as against general intelligence scores, should further increase the probability of reliable indication. (For example, achievement tests in music could now be checked, not only against general intelligence, but against the Seashore Measures of Musical Talent; and achievement tests in physics against the arithmetical and analogies subdivisions of the American Council on Education Scholastic Aptitude Test, since scores in these subtests have been found to correlate well with success in physical science.)

But it seems certain that still further controls, including careful definition of necessary limiting conditions, will have to be worked out before administrators will have that dependable yardstick which they so greatly need in this matter.

Even now, however, individual teachers may profitably use examination results, especially on standardized tests, for *self-appraisal,* including the discovery of some of their own shortcomings, such as failure to include or emphasize important topics or to explain terms and principles with clarity. Such individuals can be trusted to give themselves the benefit of the grave technical uncertainties involved—whereas administrators, even department heads, dealing with others than themselves, might often be tempted out of the necessary caution and come to treat as definite evidence results which would have at most some uncertain probability.

This seems to me about all that can be safely recommended at present under this head—except, of course, in the case of trained investigators thoroughly familiar with testing procedures and the statistical interpretation of test results. But, as already noted, we may reasonably hope for further help at this point as the science and art of testing progresses.

X. THE ACCREDITING OF SCHOOLS AND COLLEGES

Now that we are all dissatisfied with the old quantitative standards for accrediting schools and colleges which were set up twenty-five years ago, we have naturally thought of the possibility of using comparable standardized tests to check up on whole institutions, both secondary and higher. To test the product rather than prescribe the process seems like a good idea, and this idea has already been invoked in studies conducted at Indiana University and at the State University of Iowa and in the elaborate investigation of accrediting procedures sponsored by the North Central Association of Colleges and Secondary Schools, which has resulted in that Association's quite revolutionary new qualitative criteria. In the course of that study, "an extended testing program was engaged in, and institutions were rated according to each test and according to a composite test score."[6] Some idea of rating institutions on the basis of achievement test results was implicit also, of course, in the procedures of the Pennsylvania Study.

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[6] Dr. George F. Zook, "Accreditation of Secondary Schools in the Light of the North Central Association Report," THE EDUCATIONAL RECORD, January, 1935.

But this use of examinations is clearly subject to caveats similar to those already presented in connection with their use for the appraisal of departments or of individual teachers. This is evidently the conclusion reached by the North Central Association's commission, and the whole argument has been so admirably presented by Dr. Zook in a report of that commission's work that I shall take the liberty of quoting him at length:[7]

"At this point may I digress to comment upon a line of discussion which has been interpreted by many people as removing all reason for accrediting colleges and schools. I refer to the development of the testing and personnel movements, which it is said substitute the accrediting of students as individuals for the accrediting of institutions. Such an argument seems very intriguing at first, but I am convinced that conclusions much too far-reaching in character have been drawn from the studies which have been made.

"Recent years have seen a tremendous advance in devising scientific measures for testing the native ability and the achievement of individual students. All of us rejoice at the progress which has been made in this field. We believe that the testing movement will gradually enable us to solve many of our most difficult problems in counseling, guidance, and placement. If I err in my attitude toward this new device of education it is the same error which many other ardent friends of the movement commit, namely, that of placing far greater reliance on the results of tests than dispassionate judgment probably justifies. I mention this because I do not wish my position relative to the value of the testing movement to be misunderstood.

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[7] Dr. George F. Zook, address on "Accrediting Schools and Colleges," delivered at the Second Joint Educational Conference, New York City, November 2, 1933, and published in the report of the Conference, *Educational Measurement and Guidance,* American Council on Education, Washington, D. C., 1933.

"The researches of Professor H. H. Remmers in Indiana and the group at the State University of Iowa, for example, are in point. In both of these states through an extensive testing program of students enrolled in the secondary schools it was demonstrated, first, that there are marked differences between the achievement of students in the various schools, and that the present methods of accrediting schools did not by any means separate out the schools whose pupils on the average achieved the most from those which had lower averages. Furthermore, even the schools with the lowest averages had considerable percentages of students in the upper brackets, while the best always contained many who do not show up well. . . .

"It should be admitted at once, as I have endeavored to do elsewhere in this paper, that the methods used by the accrediting agencies in evaluating the effectiveness of a school or college have been crude and unscientific, but it does not follow, simply because there is a wide difference between two schools as to the levels which their students reach respectively on achievement tests, that one is a better or a more effective school than the other. Any two schools will vary greatly in the types of students which they enroll just as any single school will contain students with a rather wide range of ability. Hence to assume that only those schools or colleges whose students make the highest average on tests are the ones which should receive recognition is to ignore altogether both the level of native ability and of preparation which students possess at the time of entrance. A school or a college may enroll students of fairly high ability and good preparation and yet do relatively a poor piece of work. On the other hand, a school or college enrolling students whose level of native ability and preparation may be fairly low and which adapts its resources vigorously to a program suited to the needs of its students may be in its realm as effective if not more effective than the first institution. Until, therefore, we relate the results of taste for native ability to the results of achievement tests from the same students, until we compare the achievement of students at the end of two, three, or four years with what they started out with, and until we take into account the differences in objectives which the respective schools and colleges may be expected to have, we have no right to assume that a high level of achievement test scores is any better gauge of the effectiveness of the school or college than the crude methods now being followed by the accrediting agencies as a means of identifying the effectiveness or the quality of the institution. So far as I know, the conclusions which have been reached relative to the substitution of the accrediting of individuals for the accrediting of institutions have not been based on considerations of this kind.

"When that stage of development is reached in the testing program, the results of tests may become a significant means of identifying the quality and the effectiveness of the educational process at a given school or college in comparison with what is found through the same process at another school or college. To whatever extent, therefore, tests can be used in the process of accrediting schools and colleges, I am sure that they will be welcomed as one of the few objective and scientific means of evaluating an institution that we now have at our disposal.

"On the other hand, not even the most ardent friend of the testing movement would claim that the results of tests measure all that we expect our youth to get out of school or college. An English schoolmaster recently said that he believed that the education which a school boy receives out of class was more significant than what he secures in the classroom. Whether we agree with him or not we must agree that tests do not measure this aspect of the educational process very well, if at all.

"In the same way the results of tests do not measure all that we expect a school or a college to be. Fond fathers and mothers, for example, want to know whether the social life of the school or college is healthful; the people of a community want to know whether their schools have adequate equipment to do the things they attempt to do; the constituency of a school or college wants to know whether the finances are being handled properly; in short, society is interested in the total pattern of an educational institution, including that part of the educational process which can be measured objectively, that part which is imponderable, and even that administrative and physical machinery and equipment commonly regarded as necessary or desirable for an effective school or college.

"I trust, therefore, that you will join me in regarding the accrediting of students through the testing and personnel movements not as a substitute for the accrediting of schools and colleges but as a supplement to it. Both are extremely valuable and important social devices operating for essentially different though supplementary purposes. While the accrediting of individuals may modify the methods of accrediting institutions and even be used as an important means to that end, it will never be more than one of those means. Society is anxious for the new ways of identifying the native ability, the special interests, and the achievement of individuals, but it is equally interested in ways and means of identifying the total effectiveness and the adequacy of the institutions which it establishes for these and other purposes incidental thereto."

Later in the same address Dr. Zook presents what seems to be the nub of the matter in the following sentences: "The testing movement may prove very helpful, but I wish now to hazard the guess that the accrediting associations should not themselves engage in a comprehensive testing program in institutions which are applying for accrediting. They may, however, properly expect an institution to show that it has an active testing program and to make the results available."

In other words, self-appraisal by an individual institution—like an individual teacher—on the basis of test results, is probably feasible and worth while; but for some time to come at least testing should play only an incidental and auxiliary part in general accrediting procedures.

XI. THE EMERGENT MAJOR FUNCTION OF EXAMINATIONS: GUIDANCE

There remain two other utilities which have been claimed for examinations: that they furnish data for educational guidance, and that they accumulate materials for research. But since everyone would admit, I judge, that the latter of these functions must usually be incidental and secondary, we need discuss here only the former: the use of examinations in connection with *educational guidance*—which I have already characterized as their emergent major function.

The reason why guidance is the emergent major function of examining is, of course, that it is the emergent major function of the entire educational process. At long last we are beginning to understand that we must learn our pupils before we can teach them; that unless we know quite a lot about a student's abilities, aptitudes, interests, and personality, and his previous attainments, and his background and circumstances, we cannot, except by blind chance, select the teaching materials (i.e., "courses") or methods or disciplines or goals which will be really serviceable to him; that in the absence of such knowledge we are very likely to impose upon him materials, methods, disciplines, and goals that will be thwarting and stultifying; that in the light of such knowledge, on the other hand, we can—or under a sufficiently flexible system could—plan for him an educational program into which he would throw himself with zest, and in which he could work on his own power, and—almost independently of us—attain that self-education which, as we so often announce, is the only real education.

All of us have now and then the experience of steering some student who has been failing and miserable in a program for which he was not well adapted into some other program which really fits his needs, and seeing him blossom out into happy success. One problem case solved! But we realize now that we ought to be doing this, not now and then, but all the time with all our students at every level. In short we are coming to appreciate the literal correctness of Professor Morrison's startling dictum "to the effect that teachers should spend half their time studying their pupils as growing individuals, and the rest of their time doing what that study indicates is desirable and necessary." [8]

We are beginning to see also that this doctrine has two major corollaries:

First, *a very great diversification of our courses and methods and disciplines and goals;* the setting up of many differentiated standards, as desiderated above, adapted to all classifiable kinds and degrees of Individual Differences. The theoretical ideal is an individual curriculum built for each individual boy and girl. This ideal we shall never fully attain for practical reasons of administration and expense. But there is no reason why it should not be nearly approached through an adequate increase in the variety of courses and methods of instruction in our existing schools and in new kinds of schools which should be created, *plus* a free and flexible utilization of this variety of courses and methods in the interest of each individual. The increased expense involved could be met from a fraction of the current expenditures of society upon that considerable proportion of crime, unemployment, and destitution which is directly traceable to the malfeasances of our present rigid educational system.

Second, *the general introduction into the schools throughout the Nation of methods now available for the study of individuals and individual guidance.*

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[8] Cited from Dr. Ben D. Wood's "The Major Strategy of Guidance" (EDUCATIONAL RECORD, October, 1934). Readers interested in educational guidance and the relation of examinations to guidance are referred to that article and to two other important articles by Professor Wood: "Basic Considerations in Educational Testing" (read at the National Education Association meeting in Minneapolis, February 28, 1933, and published by the Committee of Educational Testing, May, 1933); and "The Ultimate Basis for Satisfactory College-High School Relations" (*Bulletin of the American Association of Collegiate Registrars,* July, 1934). Reprints of these three articles may be obtained from the Cooperative Test Service, 500 West 116th Street, New York City.

In practice this second corollary will have to be developed first, because it is the easier and cheaper to develop, and because only the actual study of many thousands of individual students in many hundreds of schools and unavailing efforts to provide for the ascertained needs of those individuals within our present rigidities will bring home even to educators, much less to boards of education and the tax-paying public, the desperate need for more diversified facilities.

It has to be conceded, of course, that the methods referred to as being now available for the study of individuals, with a view to educational and vocational guidance, leave much to be desired—are capable of vast improvement. But the fact is that this aspect of the matter has been unduly stressed, and has been stressed largely as a defense mechanism, so that we might feel satisfied to postpone the effort (and expense) of introducing such methods into our own schools.

The other side of the truth, to which so many of us try to close our eyes, is that the methods already known of learning boys and girls—ascertaining their abilities and aptitudes and interests and qualities and backgrounds and circumstances, and assembling such information for intelligent and highly useful use—are sufficient to enable us teachers and administrators to avoid at least many of our habitual mistakes and educational crimes—if only we will make use of them! Does a physician wait until he has a specific for a disease or an absolutely perfect method of diagnosis and therapy before he will undertake a case?

Which brings us back to our central topic of examinations and their use in educational guidance. Guidance has use not only for achievement tests—the only kind we use for all other purposes of examinations—but also, as previously noted, for the other new kinds of tests which the psychologists and testing experts have developed: intelligence tests, special aptitude tests, vocational and avocational interest tests, and personality ratings or other types of personality data (such as the "descriptive" type devised by Dr. Eugene Randolph Smith and the Committee on Records and Reports of the Progressive

Education Association and the anecdotal type developed at the Mechanics Institute of Rochester, New York).[9]

In connection with achievement testing for guidance purposes three points may be made:

1. For the guidance purpose, even more vitally than for other purposes, a high degree of comparability of test results is important. We need to know, not only how well Johnny has done in meeting or excelling the somewhat vague minimum or "passing" standard of some particular teacher or even of some central examining board, but how he *ranks*, in his mastery of various materials of learning, in comparison with large groups of other students with similar and dissimilar backgrounds from similar and dissimilar schools. And we need to be able to compare, reliably, his attainments in various fields at one stage with his attainments in the same or similar fields at a number of later stages, so as to have measures of growth, and especially to enable us to distinguish persistent and fundamentally characteristic interests and aptitudes from others which may be temporary and accidental. These are the essential points which achievement tests can yield for purposes of guidance; that is, as a basis of judgment as to the kind of school that should be attended, the materials and methods of instruction that will be profitable, and ultimately the occupation which may wisely be aimed at. It follows that, for guidance, the new-type, standardized, objective achievement test, because of the vastly greater comparability of its results, is much better than the old essay-type examination alone. Hence the great importance for educational guidance of such series of comparable tests as are now provided by

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[9] One of the best personality rating scales, devised by a subcommittee of the American Council on Education, is described in THE EDUCATIONAL RECORD, July, 1928 (Supplement). Information in regard to the "descriptive" method of recording judgments of character and personality may be had by addressing Dr. E. R. Smith, Beaver Country Day School, Chestnut Hill, Mass. The anecdotal method is described in Dr. Ben D. Wood's "The Major Strategy of Guidance," THE EDUCATIONAL RECORD, October, 1934.

the Cooperative Test Service,[10] and of such broad testing programs as those sponsored by the Educational Records Bureau and the state-wide testing programs developed in Minnesota, Wisconsin, Ohio, Iowa, Colorado, Alabama, North Carolina, Kentucky, and other states.

2. Achievement testing for guidance serves its purpose most clearly and efficiently when it is dissociated from other purposes, especially from standards-enforcement and invidious selection; just as we have already seen that a real and effective use of examinations as a method of instruction must be dissociated from standards-enforcement. The obvious reason lies in the inescapable difference between a student's willing cooperativeness towards an examination the results of which he is assured will be used *for* him, to help him solve his own problems, and his instinctive effort to "beat" any examination whose results are going to be used *against* him, in matters of admission, promotion, or graduation. We may compare the ready willingness of anyone to have his blood pressure taken by his family physician as against the attitude with which the most upright among us would be likely to confront the blood-pressure lie-detector.

3. For the guidance purpose we need a large number of tests of each individual, for the reason already cited, that no single test, and no group of tests to be administered on one crucial occasion, can give us a valid diagnosis of an individual's capabilities or even of his achievements. For such diagnosis, and hence for educational guidance, we need, as I have written elsewhere, "*a series of comparable tests over a period of years,* through which the stresses and accidents of particular occasions may cancel out, and by means of which we may follow both persistent levels and significant changes of capacity, interest, and attainment."[11]

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[10] See H. E. Hawkes, "The Cooperative Test Service," in THE EDUCATIONAL RECORD, January, 1931; or Max McConn, "The Cooperative Test Service," in *The Journal of Higher Education,* May, 1931.

[11] "Educational Guidance Is Now Possible," in THE EDUCATIONAL RECORD, October, 1933.

The foregoing paragraphs contemplate the collection of a large amount of data for each student, including the results of many tests of many kinds over a period of years. With such data must be collated all the definite biographical material the student's adviser can obtain to illuminate his background and circumstances. Obviously we have need of some instrument to assemble this mass of information in clear and significant fashion; and fortunately such an instrument is at hand in the Cumulative Record Card, whether in the original form published by the American Council on Education or in the adaptation used by the Educational Records Bureau or in other variants developed in many schools and colleges throughout the country.

"These blanks or folders" (if I may quote an earlier description) "provide an instrument for organizing and presenting, compactly and in part graphically, on a time projection, all the significant facts, both scholastic and personal, in regard to a student's career. . . . These significant facts include not only school marks and the results of objective tests but also such items as health, physical and mental, family background, financial situation, study conditions and programs, extra-curricular activities, summer experiences, vocational experiences, unusual accomplishments, reported interests, educational and vocational plans, and the like, all carried forward from year to year to exhibit both permanent and changing conditions and tendencies." [12]

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[12] "The Cooperative Test Service," in *The Journal of Higher Education,"* May, 1931. Full descriptions of these forms, with samples, have been published in the *Supplement to the Educational Record* for July, 1928; in the *Program for a Study of the Relations of Secondary and Higher Education* (the "Pennsylvania Study"), issued by the Carnegie Foundation for the Advancement of Teaching, 1928; and in an article on the Pennsylvania Study by the present writer in the *Bulletin of the American Association of Collegiate Registrars,* Vol. V, No. 2 (1929). See also a valuable discussion in Dr. Ben D. Wood's "The Major Strategy of Guidance," in THE EDUCATIONAL RECORD, October, 1934.

Every teacher or administrator or personnel officer who has used such cumulative records knows that in many cases they are almost self-interpreting, that the multifarious data they contain, compactly and sequentially organized and in part graphed, often fall at once into a clear picture, each part reinforcing every other part, and the whole affording decisive answers to such questions as what courses the student should take and avoid, what kind of discipline he needs, what further schooling he should seek, and even what kinds of career he should and should not endeavor to follow—answers often decisive and convincing not only to the teacher or school officer but also to the student himself and his parents. In other cases, of course, the picture is not so clear; one part of the data may seem to contradict other parts; but even such discrepancies usually afford clues for further investigation or experiment, with more hope of a final solution than any other procedure holds out.

Many of us hope that the general introduction into our schools at every level of examinations given and used specifically for guidance, and a parallel general introduction of cumulative records to assemble the results of such examining with all other relevant data, will eventually solve the problem of admission to college and also the problem of guidance in college and with respect to professions, reducing to a minimum failures in college after admission and failures in professional schools and professional licensing examinations.

And we believe also that the increasing use of examinations for guidance and of cumulative records will at last reveal inescapably to all that pressing need, which only a few now perceive, for what I have called the differentiation of standards; involving the provision of many new courses, and of new kinds of schools, and greatly increased flexibility in drawing upon the offerings of every kind of school in the interest of individual needs; in order that we may ultimately provide suitable instruction or training, with feasible goals, for every kind and degree of capacity.

XII. SUMMARY

I set out in this article to survey the actual uses of examination in our current educational practice, with the hope of arriving at some clear doctrine as to the right use of this instrumentality. What conclusions may be drawn from the facts and considerations presented?

It would seem to me it has appeared:

1. That the great bulk of our present huge examining activity is achievement testing, using mainly the old essay-type examination, and devoted to the combined purposes of standards-enforcement and selection.
2. That the standards thus enforced are excellent and beneficial for one particular type of boy and girl and young man and young woman, namely, those of superior bookish ability.
3. That those same standards, however, because of their uniformity and rigidity, are thwarting and damaging to all other kinds and degrees of capacity.
4. That we need, therefore, to serve these other kinds and degrees, many more, diversified standards, involving new kinds of courses and schools and methods and disciplines and goals.
5. That for the demonstration and maintenance of these new diversified standards we shall need a parallel diversification of achievement tests, of improved reliability.
6. That with the development of such diversification, however, the major use of examinations will come to be, not the enforcement of standards, but guidance.
7. That some parts of our present standards-enforcement examining are justifiable, including examinations for professional licensure and for admission, promotion, and graduation in professional schools, endowed colleges, and private secondary and elementary schools.
8. That even in these cases our present standards-enforcing examinations need support and correction from cumulative records of many previous tests and other data in regard to the students' careers.

9. That the enforcement of *uniform* standards in public schools at any level must be condemned; which is merely a corollary of (3) and (4).

10. That the alleged utility of examinations as an incentive to study is largely an illusion and rationalization; at best a minor, incidental value realized only in cases where the goal set is thoroughly appropriate to the students' capacities.

11. That the utility claimed for examinations as a method of instruction can be genuinely realized only when examinations are used specifically for that end and divorced from standards-enforcement.

12. That the utility of examinations for the improvement of teaching is either synonymous with the enforcement of standards or highly dubious; contradicted, in fact, by claims that examinations tend to stultify teaching.

13. That such stultifying effect will, however, tend to disappear as we come to use more comprehensive tests, more diversified standards, and cumulative records.

14. That we have not yet developed the necessary technique for the safe general use of examination results for the appraisal of teachers or departments; but that individual teachers may profitably use such results for self-appraisal and self-diagnosis.

15. That, similarly, testing procedures cannot at present (if ever) be relied upon as the sole basis for the accrediting of schools and colleges, but may constitute a valuable item in accrediting, as contemplated in the new North Central Association criteria.

16. That the emergent major utility of examinations is educational guidance.

17. That the developing doctrine of guidance demands, first, diversification of standards and courses and schools, and, second, the general introduction of the methods now available for the study of individuals.

18. That in examining for guidance we need all known kinds of tests, many of them, preferably comparable tests, and preferably tests used explicitly for this purpose.

19. That cumulative records are essential for the summation and interpretation of personnel data, including test results and other relevant information.

20. That the general use of examinations for guidance and of cumulative records will ultimately go far toward solving the problems of admission to college, of professional and other vocational guidance, and of the needed diversification of standards.

MAX McCONN,
Lehigh University.

Should the Number of Professional Students Be Restricted?*

SHOULD the number of professional students be restricted? This is no mediaeval, metaphysical question of the How-many-angels-can-dance-on-the-point-of-a-needle type. It is as real as fresh paint on a front door, as timely as today's newspaper, as uncertain as anything that may happen tomorrow.

The question may be approached from three angles. We may approach it from the angle of personal interest. To do so is not necessarily to be selfish. For those of us of middle age or beyond, the answer is not our own immediate concern, for whatever happens we can somehow wag along. Our personal interest is likely to center in the careers of our children and of young friends and students who come to us for counsel.

We may approach the question from the angle of professional interest. Proud of the past of our profession, imbued with its ethics and its spirit, we may honorably argue for its maintenance as it has been built up by the patient labors and the accumulated wisdom of countless workers in the field.

But I am confident you will approve a third approach, that from the angle of general interest: an impartial consideration of this question as bound up with the national problem of professional service in relation to the public weal; an approach which stresses the good of our people as a whole.

In seeking an answer to the question whether the number of professional students should be restricted, I propose to do three things:

1. To present facts as to the actual numbers in the profes-

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* This paper was prepared by Dr. Raymond Walters, Chairman of the Council's Committee on Standards as a preliminary report of that group and was delivered before the Annual Congress on Medical Education in February, 1935.

sions, giving them in clear and orderly fashion without statistical details.

2. To quote views of advocates of differing interpretations and proposals.

3. To venture an opinion which seems to issue from the facts and from other related facts and circumstances.

As to my presentation of facts, may I explain that this very topic is on the agenda of a committee of the American Council on Education, the Committee on Standards of which I have the honor to be chairman; and that members of this committee have cooperated in collecting pertinent studies relating to the professions of law, medicine, college and university teaching, and engineering.

I. What are the facts regarding numbers in the professions during recent normal years?

NUMBERS IN THE PROFESSION OF LAW

An answer for the profession of law is presented in a tabulation by the National Conference of Bar Examiners and also in a study made by a member of our Committee on Standards of the American Council on Education, Mr. Alexander B. Andrews. The tabulation of the Bar Examiners[1] cites the 1930 census which shows 160,605 lawyers in the 48 states and the District of Columbia. This was an increase for the country of 31 per cent over the number in 1920, as compared with an increase of 16 per cent in the population for the decade.

The per capita proportion in 1930 was approximately one lawyer for every 762 persons. There were 131 lawyers for each 100,000 population for the country as a whole. Considerable variation was revealed as to states and the observation of the bar examiners was that "lawyers are more plentiful . . . in the large cities . . . and that the ratio is increasing more rapidly in the large cities."

Interesting comparisons with numbers in the legal profession in European countries were afforded in an address[2] by Mr. Andrews as President of the North Carolina Bar Association in 1929, based on information in *Juristische Wochenschrift,* a weekly legal journal of Germany. These comparisons may be most compactly presented in the table herewith.

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[1] *The Bar Examiner*, July, 1932, Vol. 1, No. 9, pp. 254-257.

Numbers in the legal profession, years 1927-1930 in the countries listed below	*Ratio of population to each lawyer*	*Lawyer per 100,000 of population*
United States	764	131
Canada	1,319	75
England and Wales	2,111	47
France	4,585	22
Germany	4,134	24
Italy	2,310	43
Denmark	2,460	32
Norway	1,689	59
Sweden	16,450	6

One commentator observed[3] that, while "the demand for the quantity of legal services in such countries is less than in the United States, yet in no foreign country is the population per lawyer nearly so small as in the United States."

NUMBERS IN COLLEGE AND UNIVERSITY TEACHING

Facts about the number of teachers in colleges and universities in the United States are provided by the reports of Federal departments and of the weekly educational journal, *School and Society.*

In 1929-30 the teaching staffs of 1,078 universities, colleges and professional schools totalled 71,722 persons.[4] There were, in addition, 14,463 teachers in 331 normal schools and teachers colleges, making a grand total of 86,185 collegiate teachers.[5]

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[2] *Proceedings* of the 31st Annual Session of the North Carolina Bar Association, June 27-29, 1929. Edwards & Broughton Company, Raleigh, N. C.

[3] *American Bar Association Journal,* "A Proposal for a Limited Bar." Sidney Teiser. Vol. XXI, p. 43.

[4] *Biennial Survey of Education,* 1928-30, U. S. Office of Education. Vol. II, pp. 326, 331.

[5] *Statistical Abstract of the United States,* 1933. U. S. Department of Commerce.

In their 1934 enrolment figures reported to the author as a member of the staff of *School and Society*, 567 approved institutions had a total of 67,521 teachers. The ratio on the grand total enrolment in these institutions of 978,632 would be one teacher to 14.5 students.[6]

Comparisons with the two great English universities are afforded through the 1928 report of a Yale University Committee edited by Professors Henderson and Davies which disclosed that the ratio of teachers to students at Oxford was one to 16 and the ratio at Cambridge was one to 15.6.[7]

NUMBERS IN THE ENGINEERING PROFESSION

To our inquiry as to the number in the engineering profession an answer is given in the publications of the United States Census Office.[8] In 1930 there were 226,248 male persons engaged as technical engineers. These included civil, mechanical, electrical, mining and other engineers, but not architects, chemists, designers, draftsmen, inventors, and physicists. It is estimated that about one-half of this group held membership in the national professional societies of engineers and engineering.

The increase for 1930 over 1920, as calculated from the census returns, is about 50 per cent in the number of engineers as compared with an increase of 16 per cent in the population for the decade.

The per capita proportion in 1930 was approximately one engineer for 425 persons; and, of those enrolled in the professional societies, approximately one engineer for 850 persons. There were 231 engineers for each 100,000 population for the country as a whole.

No comparable figures are available as to the number of engineers in European countries.

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[6] *School and Society*, Vol. 40, December 15, 1934. "Statistics of Registration in American Universities and Colleges, 1934." Raymond Walters.

[7] "Incomes and Living Costs of a University Faculty." Yale University Press, 1928, pp. 164-165.

[8] U. S. Census Office, United States Summary, 15th Census, 1930, p. 62. (Quoted by David L. Fiske, *Civil Engineering*, January, 1934, page 16.)

NUMBERS IN THE MEDICAL PROFESSION

In their famous report of 1932[9] on "Medical Care for the American People," the committee in charge of the five-year program declared that "nearly 1,100,000 persons in the United States devote all or a large part of their time to providing medical service." The number of physicians engaged in private practice in 1929 was given as 121,000, the number in medical institutions as 21,000. This total of 142,000 physicians would be in the ratio for the entire country of about one physician to every 852 persons. The range was from one to every 621 in New York State to one for every 1,431 persons in South Carolina. There were, for the country as a whole, 116 physicians for each 100,000 of population.

More recent statistics, given by Dr. Harold Rypins in the *Federation Bulletin*[10] of the State Medical Boards of the United States, show "156,440 licensed physicians at the present time . . . one for every 780 persons."

As to European comparisons Dr. Rypins reports that "England has one doctor per 1,490 persons; France, one per 1,690; Sweden, one per 2,890."

At the present rate, the number of physicians in the United States in 1940 will be 171,700 and in 1980 about 211,800, according to the quoted estimate of the Commission on Medical Education.

II. We come now to the second section of our analysis: a summary of the ways in which the facts just cited are interpreted by different students of the problem, and a summary of specific proposals for solving the problem.

VIEWS REGARDING A LIMITED BAR

"The Bar is decidedly overcrowded," declares Mr. Will Shafroth, advisor to the Council on Legal Education and

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[9] *Medical Care for the American People.* University of Chicago Press, 1932, pp. 4, 5.

[10] *Federation Bulletin.* Vol. XIX, No. 9, September, 1933, p. 280.

Admission to the Bar of the American Bar Association.[11] Mr. Shafroth attacks [12] the Jacksonian idea—

> that the practice of law should be open to everyone who aspires to it. . . . It ignores the fact that the incompetents do the public much more harm than the benefits it could hope to receive through decreased costs, both by the giving of bungling advice and inadequate service, and through lowering the moral standards of the marginal lawyer.

That historically the right to restrict the number of attorneys permitted to practice has long been recognized and exercised in England was brought out by Mr. Sidney Teiser of the Portland, Oregon, Bar, in a recent article in the *American Bar Association Journal*.[13] He advocates a plan for "denying admission to the Bar to all applicants until there is a recession to the ratio of reduction determined upon," with a provision that all who are at present studying law should be exempted from this action. "The public welfare is the sole determining factor."

Dean Young B. Smith of the Columbia Law School is quoted as saying that "we continue to get over twice as many lawyers as we need to maintain the 1930 ratio of 131 lawyers to every 100,000 people."

Three counties in Pennsylvania operate a quota system by which their Bars restrict the number of lawyers admitted each year. The Pennsylvania Bar Association recently considered a recommendation of a special committee but did not approve the proposal for arbitrary limitation.

The situation seems to be fairly summed up by Mr. Shafroth:[14]

> Generally the feeling in this country is that the adoption of a quota is unnecessary and would result in vociferous protest from the public. If our lawyers act intelligently they will

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[11] *American Bar Association Journal*, December, 1934, pp. 768, 801.

[12] *Notes on Legal Education*, March 1, 1932.

[13] *American Bar Association Journal*, January, 1935, Vol. XXI, No. 1, pp. 42-46.

[14] *Notes on Legal Education*, July, 1933.

forestall it by adopting those methods which have been so successful in the medical profession. First, they will require the two-year college standard before the beginning of law study, and, second, they will, through their Boards of Bar Examiners, require graduation from law schools which competent agencies declare give an adequate legal education.

Approving measures to eliminate weak law schools and to raise standards for admission to the Bar, Dean M. L. Ferson of the College of Law, University of Cincinnati, suggests[15] that "there has been considerable work for lawyers" and that "our present and social economic trend points to still more work for the profession."

VIEWS REGARDING TEACHING LIMITATIONS

The increase in the number of teachers in American universities, colleges and professional schools from 1920 to 1930 was 67 per cent; the increase in student enrolment during the same decade was 86 per cent.[16]

At Yale, from 1918 to 1928, the student body in the four non-professional schools of the university increased 77 per cent, while the faculty number increased 74 per cent. In their 1928 report which cites these figures, the Yale Faculty Committee ascribed the progressive increase in the number of the faculty as "a determining factor in preventing the salary scale from increasing in proportion to the university's income."[17]

The teaching profession has its economic future largely in its own hands. If methods are developed for keeping down the teacher-student ratio, so as to hold the faculty at about its present size, while still giving effective instruction in the larger subjects, a steady improvement in the economic status of the profession may be expected.

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[15] Report "Trends and Needs in the Legal Profession." M. L. Ferson, College of Law, University of Cincinnati.

[16] *Biennial Survey of Education,* 1928-30. U. S. Office of Education, Vol. II, p. 326.

[17] *Incomes and Living Costs of a University Faculty.* Yale University Press, 1928, pp. 92-98.

Evidence in another direction as to trends in certain American colleges was reported by Dr. J. G. Umstattd, who found that in these colleges "the average of appointments per institution decreased from 10.7 in 1920-21 to 6.9 in 1931-32, a decrease of 35 per cent." Dr. Umstattd expressed his thought that "the problem will become more acute as the surplus of unemployed college teachers increases, and should receive immediate, nation-wide consideration."

Consideration by administrators directly concerned was given at the October, 1934, meeting of the Association of American Universities at the University of Chicago.[18]

A paper of Professor S. H. Slichter of Harvard estimated that the drop in academic employment due to the economic depression "has probably been less than 10 per cent," with a shrinkage in the number of professors "much greater in private institutions than in public." Professor Slichter prophesied that "the demand for college and university teachers will increase at a decreasing rate."

Professor George E. Carrothers of the University of Michigan gave an estimate that American universities in the ten-year period from 1924 to 1933 awarded "a grand total of approximately 16,721 doctorates of philosophy." To the question "What to do with the product?" Professor Carrothers answered in terms of college teaching and of teaching in secondary schools. Dean L. P. Eisenhart of Princeton thought it desirable to approximate in the United States what has gone on for years in Europe, where holders of the doctorate and producers of research and literary work are teachers in the *lycée* and *gymnasium*. Dean Edgar S. Furniss of Yale agreed that the secondary schools would gain by taking on doctors of philosophy who have the requisite personal qualifications for teaching younger students; and he suggested also fields such as public service as an outlet for graduate students.

At this same meeting Professor Anton J. Carlson, of the University of Chicago, took definite exception to the doctrine of restricting enrolment because professional fields are crowded. "Is it such a waste if a Ph.D., unable to find a place in education, goes into industry or business?" Professor Carlson opposed limitation in the professions, following the old guild custom. "Who are we to say nay to those who want to go ahead regardless of the risks?" Dean Charles B. Lipman, of the University of California, seconded this view, saying he objected to such limitation, just as he objected to telling a farmer how much he may plant. "We don't know enough about the future to determine now the number of Ph.D.'s it will need." President Ray Lyman Wilbur, of Stanford University, added his approval of this point of view.

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[18] *School and Society*, November 3, 1934. Report by Raymond Walters.

VIEWS AS TO LIMITING ENGINEERING STUDENTS

"A more rapid increase than ever before in the quality and number of trained experts and leaders" was predicted in a report published in 1923 by a joint committee of the National Industrial Conference Board and the Society for the Promotion of Engineering Education.[19] This was the committee's answer to the question, "Do the industries in the United States need more or fewer engineers than the number now being graduated from engineering schools and colleges?"

Eleven years later (January, 1934) a contrary view [20] was given by Mr. David L. Fiske, Secretary of the American Society of Refrigerating Engineers. Mr. Fiske, basing his conclusions on an analysis of U. S. Census figures for forty years, declared that "without regard to the employment influences of the current depression, statistics from 1890 to 1930 reveal signs of future overcrowding."

The facts at hand show mainly that in the next two decades the number of men in the profession will probably increase a third over that employed in 1930, if newcomers are limited to those with four years of college training. Professional and educational programs which disregard this situation must assume that the demand for technical engineering services will increase proportionately.

Calling attention to the sharp falling off in enrollment in

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[19] *Special Report No. 25*, National Industrial Conference Board, 1923, pp. 3-11.

[20] *Civil Engineering*, Vol. 4, No. 1, January, 1934, pp. 16-20.

American engineering schools in the past few years, Professor William B. Plank, of Lafayette College, has written[21] that, so far as the mineral industry is concerned, opportunities for employment appear to be good and that in the near future "the demand may easily exceed the supply."

That the 1923 report of the committee of the National Industrial Conference Board and the S.P.E.E. remains valid today is maintained by Dean Herman Schneider, of the College of Engineering and Commerce, University of Cincinnati. In a recent letter[22] Dean Schneider points to "the very wide range of activities covered by the engineer. There is hardly a field of construction, production or distribution in which the engineer has not become the dominant factor." He cites new avenues such as "political science and preventive medicine through the application of sanitary methods, zoning, housing; and the employment of engineers by banks holding industrial concerns." Dean Schneider concludes "that there need be no curtailment in the production of engineering graduates who are soundly trained."

VIEWS AS TO LIMITING MEDICAL STUDENTS

"There should be more effective control over the number and type of practitioners trained." This was one of the nine needs listed by the Committee on the Costs of Medical Care in its 1932 report to which reference has already been made in this paper.

"It is evident," declared Dr. Walter L. Bierring, of Des Moines, Iowa, in a paper read in September, 1933, "that doctors have been trained without any consideration of possible consumer requirements. Overcrowding, like overproduction, already existed when the country was consuming the maximum of professional services." Dr. Bierring then listed some of the social dangers of an oversupply of physicians.

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[21] *Mining and Metallurgy,* May, 1934. "Are Too Many Students Taking Mining Courses?" William B. Plank.

[22] Letter to the President of the University of Cincinnati, February 6, 1935, by Dean Herman Schneider.

Dean W. C. Rappleye, Columbia University Faculty of Medicine, said in October, 1922, at the Minneapolis Meeting of the A.A.M.C.:

> There is no longer the need for the high ratio of physicians to the population which was required in the past. The increased density of the population, the great improvement in transportation and communication, the development of better facilities for medical service in many areas, the influences of preventive medicine, and the training of nurses, technicians and other aides who are able to do some of the work which the physician needs to have done, all tend to make it possible for a fewer number of physicians to do a greater amount of more satisfactory work for a large number of people.

Dean Rappleye advocated restriction of numbers in the medical colleges, at the same time stressing that this is "only a part of the much larger educational problem," which he defined as "providing a more satisfactory and more complete medical service for the people of the country." [23]

Taking part in the same symposium in 1933, Dr. William D. Cutter, secretary of this Council and a member of the Committee on Standards of the American Council on Education, suggested that "medical education is costly not only to the individual but to society" and that "not everyone who aspires to a professional career has a God-given right to receive a long and highly technical training at public expense."

Dean C. R. Bardeen, of the University of Wisconsin Medical School, in this discussion, cited sums earned by Wisconsin physicians in 1930 which, "while not large, represent incomes high compared with those received by the large majority of the population and constitute a potent factor in leading youth to enter the practice of medicine."

> Mere reduction in numbers of those going into various pursuits does not embrace the solution. If there are too many physicians, how about the farmers? . . . What we need today is not so much a limitation in the number of medical school graduates as a greater number of graduates who are experts

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[23] Journal of the Association of American Medical Colleges, January, 1934, Vol. 9, No. 1.

in the field of social psychiatry. The World War and the world depression are evidences of a social insanity or social imbecility which constitute a challenge to the priests of Aesculapius and Hygeia.

Dean C. C. Bass, of the Tulane University of Louisiana School of Medicine, also a speaker at the 1933 meeting at Minneapolis, gave as one of his conclusions that "The chances of there being an oversupply of physicians above the public need are not such as to justify serious concern at the present time."

In the discussion of papers, Dr. G. Canby Robinson, of Cornell University Medical College, maintained that "the schools have a very definite responsibility in at least presenting to those considering the study of medicine the problem of the number of physicians and the opportunities of medical graduates." He called attention to competition from other sources for the best type of men. "If we have a situation where the outlook in the profession is not good, we will not get many of those studying medicine who are particularly gifted, men who can make a success in a number of fields."

Referring to Tennessee, Dr. O. W. Hyman, of the University of Tennessee, said that "while we have enough physicians, if we . . . calculate so many people to so many doctors, there were and still are in our state wide territories in which it is true that medical service is inadequate."

Dr. Richard E. Scammon, of the University of Minnesota, commented that "within the last ten years the cities have grown in population by about fourteen million. In the meanwhile, rural communities have decreased by one million, so it seems to me that this is a perfectly natural movement of medical men. There may quite well be a shift the other way."

It was the opinion of Dr. H. G. Weiskotten, of the Syracuse University School of Medicine, that the problem cannot be solved on a provincial or state basis. "The statistics we have indicate that this whole problem of the over-supply of graduates must be considered on a country-wide basis."

Referring to ratios of physicians to population in foreign countries, Dr. Hugh Cabot, of the Mayo Clinic, challenged the inference "that these facts have some important relation to our situation here. I assert that they have none. . . . There is no country in the world at the present time, unless it be England, in which the average American can receive the grade of medical attention which he has come to believe necessary." As to the question of restriction, Dr. Cabot said: "I do not know whether the numbers ought to be limited or not." If there is restriction, he felt that it should be done, not on a vocational basis by the profession, but on an educational basis by the medical schools, of which "a great majority at this time are associated with universities. . . . The universities are today properly regarded by the population in general as a fairly disinterested group, and I think the people will be willing to leave in their hands the decision of whether there should be a diminution or an increase."

"The Medical Profession and the Public" was the topic of papers read at a joint meeting in February, 1934, of the College of Physicians of Philadelphia and the American Academy of Political and Social Science. Several of these papers contained references bearing upon the question of restricting medical students. It was brought out in a paper by Dr. Edgar Sydenstricker,[24] Director of Research of the Milbank Memorial Fund, that:

> Such facts as are available show that in 1929 one-third of all physicians had net incomes of less than $3,000 and one-half less than $3,800. If we grade physicians in income intervals of $1,000, more physicians could be found in the $3,000-$4,000 class than in any other. And this was in the halcyon days! . . . When we consider the investment in the doctor's training and his responsibility, the inescapable conclusion is that large proportions of medical practitioners are not being adequately remunerated.

There was an interesting generalization regarding the quality of medical students as compared with others in the paper of Dr. Roger I. Lee, of Boston, in the same symposium. He said:

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[24] "The Medical Profession and the Public." The American Academy of Political and Social Science, Philadelphia, p. 25.

> The profession of medicine makes a strong appeal to a definite proportion of young men. Of course, the road is long and expensive and the final returns in material things are not great. As a result, the impatient, the avaricious and the casual students do not continue their medical studies. Many youths who mildly fancy that they might like to study medicine are deterred by the preliminary requirements in college. Nevertheless, an adequate number of able and vigorous-minded boys of varying degree of personality continue to seek admission to our medical schools. These boys seem to represent a good cross-section of college youths, and they seem to have more idealism than the average.

Referring to the "limitation of numbers in the first-rate medical schools," Dr. Lee said that "the output of doctors is not running wild in the realm of overproduction about which we hear so much."

At the same meeting, Dr. William Trufant Foster, Director of the Pollak Foundation for Economic Research, gave an address strongly advocating group practice, in which he commented on the willingness of "physicians as a body, especially family doctors . . . to risk their lives and to serve suffering mankind without regard to money rewards."

GENERAL VIEWS REGARDING PROFESSIONAL LIMITATIONS

The "extraordinary growth in the number of students" in the universities of Europe and increasing unemployment in the professions were discussed by Dr. Walter M. Kotschnig of Geneva at a conference of experts in Geneva in August, 1933.

> In almost every country there is a marked increase in the number of medical and law students. The increase in medical students may perhaps be regarded as one of the consequences of the war, which brought the experience of human suffering home to the younger generation as no other event of the last decades had done. The study of law was often taken up even before the war by those who did not know what to study. . . . Many took to higher education because they preferred it to continued unemployment.

Dr. Kotschnig's declaration was that "the number of people who are fitted by intellect and character for university study is necessarily limited"; and he expressed his judgment that the great influx of students has lowered the level within European universities. Dr. Kotschnig and others at the Geneva Conference very definitely urged restriction in the number of professional students, favoring a system of vocational guidance by which more youths should be trained as electricians, agriculturists and craftsmen.

A vigorous critic of current plans to restrict the number of professional students in the United States is Professor Harold F. Clark, of Teachers College, Columbia University. Professor Clark's views were set forth in his book, "Economic Theory and Correct Occupational Distribution," published in 1931, and more recently in an article in the *Journal of Educational Sociology* for December, 1934. In this article he says:

> No group can be trusted with the determination of the number of people to be admitted to that group. The history of groups that have had power to determine their numbers offers conclusive evidence that that power will be misused. . . . The damage caused is not less because plausible excuses are given or even because the protection of society is said to be the cause of the limitation.

Along with physicians, lawyers and engineers, Professor Clark includes dentists and architects and adds: "The plumbers, bricklayers, and carpenters know that there are too many plumbers, bricklayers and carpenters,"

Professor Clark's own proposal is that local and state planning commissions should be organized. "The state commissions will have to combine and set up a national occupational council. This will determine the optimum number of people for each occupation. All the people, of course, will have to be used to do all of the work."

Somewhat the same criticism was presented in a conference at the University of Oregon in July, 1934, by President

George W. Frasier, of the Colorado State Teachers College:[25]

> We are told that we have too many farmers, too many shoemakers, too many textile workers, too many miners, too many ditch diggers. . . . If we are to be logical then and follow the advice of the leaders of our professional schools, we would cut down the number of men entering all professions and all occupations. . . . In fact this whole line of argument reduces itself to absurdity. If we were to cut down our population by five to twenty million we would then need fewer doctors, nurses, teachers, artisans, factory laborers, miners, and laborers.

President Frasier then gave as the other side of the question his view that "We do not have too many doctors in America. Large areas of our country are without adequate medical service. . . . We do not have too many teachers in America."

> Our surplus labor must be taken up with social services which can be rendered by teachers, playground experts, doctors, nurses, and others who do not produce material things. There is a limit to the number of shoes that can be worn or cars that can be driven. There is no limit to the social services that can be rendered in our changing society.

A PERSONAL VIEW

What I have presented thus far represents material which members of the Committee on Standards of the American Council on Education cooperated in gathering and which the chairman of the committee has assembled and summarized as compactly and objectively as he could.

What follows is not objective but subjective. Other members of the Standards Committee are in no way responsible for it. This is simply a personal opinion, the thought of one man who puts it forward with full recognition of the difficulties of the problem and with no undue confidence that his opinion is right.

My opinion is based upon two assumptions:

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[25] Proceedings of the Conference on Higher Education. University of Oregon, July, 1934, pp. 92-93.

The first is that, in our American democracy today, we should accept as basic, in regard to limiting numbers in the professions, the old Benthamite doctrine: the greatest good to the greatest number. We should have in mind less the advantage of the profession and of those in it than the advantage of all of the people.

A second assumption is that the good of the people is so peculiarly dependent upon the service of the professions that satisfactory conditions within the professions are a matter of public concern. The social welfare of all citizens and the personal welfare of each citizen are bound up with how the lawyer represents us; how the engineer builds the bridges over which we ride; how the college professor teaches our sons and daughters; how the physician averts disease and, when we have it, heals us.

With these two assumptions in mind I propose a new approach to the question of limiting numbers in the professions, a question I shall restrict to the medical profession. This is the approach which emphasizes quality rather than quantity.

It might appear that quantity would be the prime consideration in the light of our principle of the greatest good for the greatest number, and that this consideration would indicate for the profession of medicine those mass methods and techniques by which industry and business in the United States have produced and distributed so efficiently and cheaply. Within certain bounds this is logical; in fact the medical profession has adopted some of these methods and techniques in hospital administration and in the mechanics of group and individual practice of medicine.

But the analogy with industry and business does not hold in the fundamental issue. Industry and business produce and distribute goods. The profession of medicine supplies expert human service which is essentially different from goods. Here are illustrative examples. A class of school children line up for inoculation; in this minor respect they are handled by mass method. But consider the same children in an epidemic or in a wreck of their school bus; the treatment they then receive is individual. Except for routine administration, medical service is individual in its very nature; it cannot be rendered by mass methods.

What concern has the public as to the number of physicians who serve it? It is vital that there shall be enough available for ordinary conditions and for emergencies. The plight of some country districts, where there are too few doctors, and of some urban sections where specialization has run rampant, emphasizes the lack of satisfactory distribution; and there is beyond this a need for more physcians in public health capacities. It is probable that the number of physicians is less important to the public than their location and availability.

Is the public affected if there are too many physicians? The author agrees with the writers quoted who believe that the evils involved are serious. When overcrowding of the profession drives physicians to acts banned by medical ethics, it is the public which suffers. There is a definite social advantage when the profession is not overcrowded and when its practitioners are substantially rewarded.

I believe that most of our perplexities will clear if we approach the problem from the angle of quality. By quality in the physician I refer to expertness, character and personality. Of these there is no over-supply. If we insist upon quality in these essential and coordinate elements, we shall not have an over-crowded medical profession for the very good reason that, while there are hosts of suitors, the number who can draw the bow of the medical Ulysses is never large. Those who can do so, those who upon this three-fold basis of quality are rightly admitted to the profession of medicine, will in all likelihood be successful and contented and will receive commensurate rewards. Most important of all, in accordance with our democratic principle, the American people will be well served.

Having thus stated my proposal in general terms, let me discuss expertness, character, and personality as I interpret them as criteria for admission to the medical profession.

Expertness. Because medicine is both a science and an art there are corresponding divisions as to expertness. Everyone grants that the marvelous advances of medicine in the past quarter century have been due basically to scientific research. Vast fields remain for exploration by young men having the bent for research. Since there is no over-supply of research ability, the quest for it among medical students should be a permanent item on the agenda of every medical school.

In medicine as an art, the expert physician is so intelligent and so well trained that he knows and utilizes the findings of science effectively. There is no plethora of such capacity.

Character. I would paraphrase here a definition which William James (physician, psychologist and philosopher) once gave of an English gentleman. The definition would then be: "A physician of character is a bundle of specifically qualified reactions, a creature who for all the emergencies of life has his line of behavior distinctly marked out for him in advance."

The roots of honor in the physician, as John Ruskin wrote, are to keep the people in health and to die "rather than leave his post in plague." Precisely because such a code has become associated with the physician, the lapses of even a few physicians come as a shock. To determine which of the candidates for the medical profession are fitted to measure up to its stern professional standards becomes a peculiar obligation to medicine and to the public.

Personality. There is the sense of vitality which marks the physician's personality. He need not be an Osler, a Welch, or the particular physician whom you would cite as a towering figure. But he should have a personality inspiring confidence and cheer. What every patient knows is that he is helped by the man as well as by the physician.

The element of personality enriched by education and culture makes the physician effective as a practitioner and also as a leader in our democracy. President Conant, of Harvard, recently referred to the way in which distinguished professional men, among them physicians, "profoundly influence the thought and action of the whole country."

If it be granted that expertness, high character, and vital personality are essential requirements of the physician, the question arises as to who shall measure these qualifications and how.

There are persons who hold that the whole problem of the professions should be dealt with by governmental action, by broad social planning. Whatever our own attitude may be, it is manifest that at the present time no federal or state action is likely.

There are persons who favor judgment by the profession, through its official organizations and commissions. As a layman let me express approval of the trend toward national grouping and recognition of specialists as an advantage to the people in their perplexities as to who is and who is not a properly qualified specialist.

The broad problem of qualifications must, as I see it, be met early. It may well become the responsibility of that agency to which Dr. Hugh Cabot referred as "a fairly disinterested group," namely, the university medical schools.

The medical school is in a position to judge, perhaps better than commissions whether of the laity or of the profession, regarding the quality of candidates for the profession. I believe that our best medical schools are already doing this creditably well. They are making quality the basis for admission, for advancement, for graduation from the medical school.

As to admission they are utilizing various criteria, such as grades attained by applicants in their liberal arts work, scores made in the Medical Aptitude Test, and confidential opinions of the science professors who taught the applicants in the liberal arts college.

As to advancement and graduation, they are employing examinations of both old and new types, including the promising new devices of qualifying examinations for students at the end of two years of work and of comprehensive examinations, along with other content examinations in the senior year, as a final quality test.

All of these academic procedures are of prime importance.

But they are not enough. There remains the necessity to obtain estimates of the cultural and ethical background and outlook of the applicant for admission and of the candidate for graduation. No task facing a dean and faculty calls for more care, wisdom and humility. But undertake it they must.

And now for my concluding thought. It seems to me that, if we accept the doctrine of quality first, the determination of quality among candidates for the medical profession may well be left to the medical colleges. If so there will probably be a solution of our question as to numbers in the profession—a solution which issues from the economic conditions in which we find ourselves. Financial limitations hamper every university and medical school. With stabilized income from tax sources in institutions under public control, with stabilized income from endowments in institutions under private control, with stabilized fees in both types, the gifts which trickle in should be assigned not for more enrolment but for more research and for improvement in teaching facilities.

Each medical college should resist the temptation to take more students merely to make money. Each medical college should hail quality as its obligation and goal as never before. In this policy there should be concurrence by the Council on Medical Education and Hospitals of the American Medical Association, by the Association of American Medical Colleges, and by the Federation of State Medical Boards of the United States. This is an objective, I firmly believe, which is unselfish, devised for no private advantage, but calculated rather to bring the greatest good to the greatest number of American people.

RAYMOND WALTERS,
University of Cincinnati.

Academic Freedom*

THE supreme, all-inclusive duty of a university is to seek to know the truth, the whole truth, and nothing but the truth; a search full free, thorough; for every side, every factor, every angle of every phase of the truth; a search wholly untrammeled, no area *verboten*, no suspicion of financial inducement or tenure-incentive to color findings or to warp honest interpretations.

Just as judges are appointed, not to serve the will of their appointees, but to serve Justice, pure and unalloyed, so scholars are selected by trustees, not to reflect the judgments of trustees, but to serve Truth fearlessly and dispassionately.

Institutions may be organized primarily to serve causes—labor colleges, communistic colleges, capitalistic colleges, sectarian colleges, Nazi-controlled institutions, avowedly indoctrinating from and for one viewpoint; but such "proprietary institutions" are not real "universities" in which scholars may never be hampered in their search by any necessity of arriving at some set objectives or results or of conforming to the views of some particular sect or order. Their search must be unbiased, free, sincere, "without wax."

Never to fetter truth, never to straitjacket progress, never to prostitute knowledge, but ever and only to know and to release truth among men—that is a university.

The right to express is a corollary of the right to know and is subordinate to it. Some of the disrepute attached to universities and academic freedom is due to a bit of confusion at this point, to indulgence in freedom of speech before freedom to think had first been taken advantage of sufficiently. Scholars, as such, are supposed to speak only that which they know and to testify only to that which they have seen. In other words, they are free to speak on subjects on which they have earned the right to be heard; and such right, viz., to set forth the results of thorough research, with comparisons and checkings of their own and their fellow specialists' investigations, is engraved on the seal of every true university.

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* Section from an address, "The Metes and Bounds of Freedom," delivered at the Baccalaureate of Syracuse University, June 2, 1935.

For many decades the danger zone of academic freedom, or "area of sensitiveness," was in the field of the physical and natural sciences, where physical evolution seemed to clash with the church's teaching. Now, however, the field for inquisition is in the social sciences, where social evolution seems to clash with the established order.

Society is unquestionably in a state of flux. No one would claim the present economic and social set-up to be final, a closed book. Everyone will grant some measure of imperfection, some need for improvement. It is absurd to expect universities to guarantee continuation of the existing order, just "as is," without revision. Respect and loyalty to past and present are not inconsistent with appraisal and criticism with a view to improvement. Indeed, advocacy by due processes, within prescribed rules of the game, without violence or inciting to violence, with due regard to the rights of others, is a manifestation of pure patriotism.

On specific proposals men differ honestly and should differ tolerantly, each recognizing both the right and the sincerity of the other. Flinging epithets, bogey words, "Fascist," "Communist," at those who differ on method or tempo of change is as decidedly unacademic as either inquisition or boycott are un-American.

Against the background of this realization that the area of the social sciences has become an arena, we ask, "What is this academic freedom of members of a university family?"

In relation to students or to the classroom, it is their right, rather their duty, along with the students, to dig out all the facts without prejudice or passion, to examine and to present all sides of each proposition. For example, social, economic, and political life in all its phases should be thoroughly studied, all schools of thought, all serious plans and proposals, all doctrines, and all *isms*. "A university is an intellectual laboratory where every mental substance imaginable should be brought to be tested and treated, and thus made intelligible."

Too many of the public are guilty of the fallacy of confusing teaching with indoctrinating and distinguish not between teaching about a theory and promoting that theory. Teaching about socialism does not mean trying to make socialists. The very opposite may be the result. "Teaching" any particular subject does not mean either to defend and advocate or to oppose a particular viewpoint, or to try to furnish the student with ready-made ideas, but rather to seek to train him to examine all facts and arguments, to weigh and compare for himself all pros and cons, so he may reach intelligent conclusions.

There is general agreement to the proposition that, however proper it may be for a teacher in an elementary or secondary school to indoctrinate principles, viewpoints or customs on which our civilization is agreed, the method of teaching in a university is that of open inquiry, analyzing and appraising without bias, neither trying to reach nor trying to avoid any particular conclusions.

The true teacher, while having, of course, his own convictions and making no effort to conceal them, yet seeks not to impose his particular point of view, or specially to promote his particular theories. Rather, with personal detachment he will seek to unfold fairly all possible views on controversial issues, even leaning over backward to be sure he is fair to views in disagreement with his own. His efforts are to train students to independent thinking, to refuse to accept on mere assertion or authority without personal investigation and persuasion, to become skilled to resist propaganda from any source, neither blindly accepting as right things as they are nor fanatically hitching his wagon to the comet of a current *ism*.

The teacher's license may bear the imprimatur of a state, but his authority is of the truth only, his loyalty to the truth unalloyedly, and his objective, the whole truth, even if his own pet theories perish in the process.

Academic freedom also protects the university teacher outside the classroom in uttering fearlessly his findings in the field in which he has qualified himself to speak. In other utterances outside the classroom, he has, not academic *freedom*, but the freedom common to all citizens; no more, no less. He will, of course, disavow the authority of the university as back of his utterances and disclaim any special consideration. Academic freedom adds no weight to his general utterances, but gives him the same right as any other citizen to make either a sage or a fool of himself, and protects him only from any academic disability as a result of exercising his rights as a citizen, in the same ways as do other citizens.

May I seemingly digress here to consider freedom of speech in its wider application, of which academic freedom is a part?

Whence these fears and questionings among us? Have we not confidence in the truth? It needs not protection by the blinders of ignorance, or the fetters of suppression. It needs not the services of a firing squad, military or academic. Old Gamaliel's philosophy is good for any age: if this thing be of God, you can't stop it; if not of God, you need not try; it will die of inanition.

Have we not confidence in knowledge? Eternally right is the thesis that truth is not established by fiat but by free inquiry, not by edict but by education. A little knowledge may be a dangerous thing, but it is more knowledge, not ignorance, that dissolves the danger.

Have we not confidence in the American people, in their capacity to know and to discriminate, in their balance and poise? Surely in our land we can be confident that truth will be found, will prove winsome and defensible, will prevail. You cannot fool the majority of our people over any considerable period. We insult ourselves in fearing any general serious infection by evanescent agitations. The Gibraltar of our institutions is unmoved by gales of criticism, no matter how tempestuous. Our fear should shame us. Have we no more faith than that in ourselves and our institutions?

The only safe indoctrination is with truth—more and more truth. Repression, ignorance, and half-truths are always dangerous.

One boyhood scene is etched sharply on my memory. I shrank away in fear as my older brother, during an early morning celebration of the great national holiday, poured a trail of gunpowder for a rod or more along the dry pathway by the millpond and touched off a fuse at the end of it. A sizz, a puff, much smoke—that was all! My fear was due to my only previous knowledge of gunpowder as a dangerous explosive when confined or repressed.

Explosive ideas, allowed expression, prove harmless even if spectacular, but repressed, work destruction.

Freedom of speech provides the antitoxin that will render powerless the virulent germs of radicalism. Will Rogers in a Jubilee broadcast to England recalled the familiar scene in Hyde Park, London, where every group is given full opportunity for self-expression. In the inimitable way in which he frequently clothed sound sense in colloquial parlance, he added:

> It showed me England, like America, can never have communism, fascism, or any other ism. Here was the Black Shirts, and about a hundred yards away was the Communists, and in between was half of London laughing at both of them, and when I thought that was going to be a war it ended quietly.
>
> They sang "God Save the King," and all went home satisfied. They all had had their say, and, after all, nobody wants his cause near as bad as he just wants to talk about his cause.
>
> England, you solved that problem. You certainly let 'em talk. I wish we would do a little more of that over here. Maybe it would be better for us. We would let 'em get it off their minds.

In more dignified prose, Secretary Ickes recently expressed the same idea: "Too much freedom is better than even a little restraint imposed from the outside, because excesses, if indulged in, will in the end either cure themselves or kill themselves."

If we had more sense, and more sense of humor, we might recognize that soap boxes may be society's safety valves, for "there is nothing more tedious than the speeches of the unpersecuted propagandist."

Safety is by way of more truth, not less. Suppression is best achieved, not through repression by authority, by muscle, law or arms, but by turning on the light of more truth. In the darkness, dampness and closeness of the dungeon, vermin, rodents, and germs thrive. The socially pestiferous thrive on repression and imprisonment. Shakespeare's King Richard suggests the wiser way:

> But when from under this terrestrial ball
> He (the sun) fires the proud tops of the eastern pines
> And darts his light through every guilty hole,
> Then murthers, treasons, and detested sins
> The cloak of night being rolled from off their backs,
> Stand bare and naked, trembling at themselves.

Turn on the light! Its antisepsis kills germs.

Turn on the light! The only cure for communism, for example, is to give to it a better answer, than it can make for itself.

In openness toward the truth, not in a mind closed with partial truth, lies safety. Efforts to stabilize at an imperfect stage, to freeze inequalities and injustices, will build up an in-equilibrium which makes overturn and catastrophe inevitable. This is the way of autocracy, damming back natural progress until the only recourse is revolution; for when convictions deep and clear find opportunity stifled, the only way out is by force, as in 1776.

On the other hand, open-minded adoption of new truth is the way of both safety and progress. Democracy with opportunity to right inequalities and injustices step by step as revealed, progresses by evolution instead of revolution. In American democracy, with its provisions for orderly processes, for responsiveness to new truth, for ballots in place of bullets, there is no call and no place for a program of change by physical force or revolution. Such advocacy is an exotic growth, entirely foreign to this "Sweet Land of Liberty."

Fairly debatable is the question to what extent protection in freedom of speech should be afforded those who would use such freedom to promote what would destroy that very protection both for themselves and others.

But the question still is: By repression or by refutation? If they can be refuted, clearly refutation is the method both of Americanism and of common sense, and nothing more is needed. If they cannot be refuted, they cannot in the long run be successfully repressed.

But let us now return from observations on freedom of speech in general as a background of academic freedom to further specific consideration of the latter.

Academic freedom is neither an individual right nor the natural prerogative of a teacher; neither a license with some magic protection nor a senatelike privilege with immunity. Rather it is the freedom of the teacher to teach within the framework of a university, such freedom finding its charter in truth with the university as its prophet. Hence while not arbitrarily controlled by the university or by any external restraint, it is decidedly subject to natural self-limiting and to limitations by the truth.

Academic freedom is not a blank check; it is limited by the deposits to the teacher's credit, the degree of his scholarly attainments. It is not freedom "to say what you think without thinking what you say"; not the right to unlimited expression whether or not possessing anything worth expressing; not license to scatter about publicly half-baked theories, egotistical vagaries, or to vocalize loose thinking masquerading as liberal thinking; but rather freedom to speak under compulsion of thought that which is worthy of being said by one who is qualified to be heard. The measure of the knowledge bounds the measure of academic freedom.

Moreover, this peculiar brand of freedom is conditioned also by an attitude or spirit befitting its source—truth and the service thereof. It is only for those of academic attitude, scholarly tone, and scientific spirit.

How does this spirit manifest itself and qualify its possessor? By judicial poise, by dispassionate, patient, thorough searching for facts; by deliberate, balanced judgments; by tolerant, temperate utterances; in sharp repudiation of superficiality or prejudice in investigation, inaccuracy or exaggeration in appraisal, sensationalism or dogmatism in advocacy, fanaticism or iconoclasm in activity.

The scholarly attitude also eschews partisanship and scorns propaganda, seeking as it does, not to convert to a viewpoint, but to find and to spread truth unalloyed.

In the original universities the professor's freedom of speech was correlated with the student's freedom of listening. The former could say what he pleased; the latter could attend or absent himself as he chose—a fair sporting proposition. In these later days when a student is compelled to attend, and possibly to listen, and is dependent for a grade on the fairness, if not the favor, of the professor, the same sportsmanship will limit the teacher to dispassionate and scholarly treatment of the subject for which he has been chosen, to the exclusion of extraneous, controversial, or offensive discussion.

The academic approach is more intellectual than emotional. In chemistry many reactions are conditioned by the temperature of the ingredients. In physics heat is a major factor in accurate measurements and comparisons. Even so there is a temperature appropriate to the discussion of social and economic problems. The man of science keeps the atmosphere of his investigations below boiling point. Light waves can be converted into heat and sound—all too extensively are. The scholar's task is more the reverse process, transmuting sound and fury into enlightenment.

Are professors naturally impractical? Possibly so, and possibly they should be proud of it. Their main concern is with the whole truth, the truth of eternity, rather than with the approximations of the hour. Their more or less detached approach and relation to the passing phase, the current experiments and expedients of blocs, parties, or sects is mainly the scholar's effort to discern trends, analyze the determining forces and motives, delineate the issues basic to the process, and to set these fundamentals forth before men.

For the scholar to be found more valuable as counsellor than an executive or as administrator is both natural and creditable.

Does the immaturity of mind of many students impose any strictures on academic freedom? There are two angles to a reply.

Teachers generally accept as a proper pedagogical restraint the duty of tempering the teaching to the tutee, of guarding against taking unfair advantage of immaturity by indoctrinating before the student has been trained in the technique of independent inquiry. There is general agreement also that the teacher, with a sadistic delight in shocking the immature student, in ruthlessly ripping up his anchorage, or in smashing his soul's furniture, in disregard of the duty of leading from little to more, away from the incomplete or illogical only by the illumination which comes from personal search and persuasion, should either be reorganized by his colleagues or returned to the graduate school for further training.

But there is the other angle: Students are not as gullible as many alarmists and inquisitors represent—another spectre, created mainly by undue fear. To regard the modern American youth as a docile uncritical receptacle of professorial viewpoints, accepting without question all that is placed before him, malleable at the professor's will, shaped on the classroom potter's wheel—well, it just is not so!

He does not know modern young America who thinks some professor with views at variance with sound thinking and sane judgment can successfully play the Pied Piper. Occasionally perhaps there is a docile disciple; but for each such there are scores alienated, with whom he loses respect and influence.

Since academic freedom is something to be achieved rather than received, won by self-limitation rather than bestowed by an institution, abuse of its privilege usually will be, as President Lowell once suggested, more a "matter of decorum than of discipline." Capital punishment need not be invoked against poor judgment or bad manners.

But there still remains to be considered the duty of an institution to guard against the abuse of its name and influence, against misrepresentation by those who would use it as a megaphone for immature enthusiasm or fanatical advocacies.

There is some question about the effectiveness of a teacher's protest that he speaks only in his own name, not for the university and without its warrant, when his very hearing is obtained and publicity accorded him, not merely as a citizen, but because he is a professor trailing the name of the university. There is no question as to his freedom and right as a citizen, but his utterances unavoidably do raise or lower his value to the university and to his profession, and the value of the university and of his profession to society.

The duty of the teaching profession to guard itself against abuse by its members is inseparable from the institution's concern for its protection. If a teacher in his public utterances and activities gives the impression of scholarly poise, sagacity, discrimination, tolerance, and fairness, both the university and the profession are benefited. But, per contra, he can bring both into disrepute.

No academic freedom can protect the egotistical, sensational, notoriety-seeking or the intemperate, uncharitable, sharp-tongued from depreciated usefulness to their institution and lessened value to their colleagues.

If the position and power placed in a man's hands by truth for truth are prostituted to partisan propaganda, or if by destroying confidence in his scientific spirit, he discredits his profession and his institution as guides for students and as leaders for the communty, then his fellow-professors should undertake his reformation.

The institution, as such, should err in leniency, for tolerance of even the abuse of freedom is infinitely to be preferred to the assassination of freedom, even if transgressed. Certainly in no sphere should general procedures or policies be established because of, either for or against, the lunatic fringe.

But in most cases, if not all, abuses can and should be cared for by the profession, by fellow-professors, rather than by the institution apart from these. One trouble has been that teachers, anxiously absorbed in occasional necessary and proper efforts to protect some of their members from errors by administrative officers, or by trustees, or in reaction against the attitude of patrioteers and self-appointed custodians of the ark of "truth," have not sufficiently felt the responsibility, or taken over the responsibility, of protecting or purging their own ranks.

There is no use trying to close our eyes to the current wave of hysteria, as natural in economic crises as in war psychoses. The depression tends to stimulate the jitters over communism and other economic sophisms, which incidentally are served only too well by the exaggerated anxiety of their alarmed persecutors. Too many fear and believe the worst, put the worst construction on appearances, out of suspicion color the facts and the interpretation thereof, ridiculous even though sincere in such suspicion.

This hysteria is not of any one class or group; not peculiar to newspapers, not of a single chain of newspapers. Newspapers as much reflect it as create it. It permeates quite widely.

I am proud of the general community and of America for the place and privilege accorded to university teachers. No group in Syracuse, the state or the nation are less conscious of restraint on the exercise of the duties and privileges of their profession, less conscious of compulsion toward viewpoints, less conscious of the necessity of conformity, or of the necessity to please those with whom or to whom they render service.

Less than lawyers, doctors, clergymen, bankers, business men, publishers, or any other group except the farmers, do they feel the compulsion or operate under necessity of studying to avoid offense to influential or significant clients, patients, parishioners, patrons, customers, subscribers, or public at large.

America has made academic freedom a reality. To a percentage in the highest nineties have professors proved themselves worthy of that trust.

But freedom is all of a piece, whether freedom of opinion, of speech, of the seas, of the air, or of academic association. All phases are of truth, both released and limited by knowledge of the truth.

Focused on one obtruding phase of it as we have been for much of this discourse, it is easy to overlook its wider sweep, the larger concentric circle of its cosmic, eternal, and personal significance. An all-embracing freedom is the goal of humanity's search; our souls are restless with the longing for complete harmony. For several decades intellectually imprisoned by a materialistic philosophy, men now seek release that they may find satisfaction for their stirring spiritual potentialities.

CHARLES WESLEY FLINT,
Chancellor, Syracuse University.

The 1935 College Sophomore Testing Program

I. INTRODUCTION

THE introductory and concluding sections which have from 1932 to the present been included as part of the annual report have this year been waived. These sections have normally been given over to the philosophical implications which have their roots in the facts of the report. Since the current issue of the RECORD includes one of the most intriguing and thoughtfully conceived discussions of individualized education as a philosophy, the committee takes pleasure in referring the interested reader to it: *Examinations Old and New: Their Uses and Abuses*, Max McConn.

II. THE 1935 COLLEGE TESTING PROGRAM

Participating Colleges.—The total number of colleges ordering tests specifically for the college sophomore program was 93; the total number ordering tests for the physics program was 269. The latter project grew out of previous sophomore surveys and is a joint enterprise sponsored by the committee making the present report and the Committee on Tests of the American Association of Physics Teachers. Because a considerable number of the colleges failed to make returns in time for full use in this report, the total number of colleges represented in the percentile tables and tables of averages for the sophomore tests is 78, and the total number of colleges represented in the portion of this report relating to the physics testing program is 132. Since the full report of the physics testing program will appear elsewhere,[1] the list of the colleges participating in it will not be included here. The colleges taking part in the sophomore program are scattered in 35 states; the names are listed below by states:

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[1] *The American Physics Teacher*, Supplement, September, 1935.

ALABAMA
Spring Hill College

ARKANSAS
College of Ozarks (4)
Harding College (4)
Hendrix College

CALIFORNIA
*Immaculate Heart College (3) (4)
Mills College (2) (3) (4)
San Benito County Junior College (3) (4)

COLORADO
Colorado State Teachers College (2) (3) (4)

CONNECTICUT
Junior College of Connecticut
Teachers College of Connecticut (2) (3) (4)

DISTRICT OF COLUMBIA
Mount Vernon Seminary (2) (3) (4)
Trinity College (2) (3) (4)

GEORGIA
Emory University (2) (3) (4)
Piedmont College
Shorter College

ILLINOIS
Aurora College (3) (4)
Monmouth College
Rosary College (3) (4)
St. Xavier College (2) (3) (4)
Wheaton College (2) (3) (4)

INDIANA
Manchester College (4)

IOWA
Estherville Junior College (4)
Graceland College (2) (3) (4)
Iowa State Teachers College (4)
Trinity College (3) (4)

KANSAS
Bethel College
St. John's College (2) (3) (4)

KENTUCKY
Berea College (2) (3) (4)
*Caney Junior College (2) (3) (4)
Centre College (2) (3) (4)
*Eastern Kentucky State Teachers College (3) (4)
Louisville Municipal College (3) (4)
University of Louisville (2) (3) (4)

MAINE
Westbrook Junior College (3) (4)

MARYLAND
Blue Ridge College (3) (4)
*St. Joseph's College
St. Mary's Female Seminary (2) (3) (4)
Western Maryland College (2) (3) (4)

MICHIGAN
Adrian College (3) (4)
*University of Michigan

MINNESOTA
Carleton College (2) (3) (4)
College of St. Benedict (3) (4)
College of St. Catherine (2) (3) (4)
College of St. Scholastica (2) (3) (4)
College of St. Thomas (2) (3) (4)
Eveleth Junior College (3) (4)
*Macalester College (4)
Rochester Junior College
St. John's University (2) (3) (4)
*St. Mary's College (4)
St. Paul-Luther College (2) (3) (4)
University of Minnesota (2) (3) (4)
Virginia Junior College (3) (4)

MISSOURI
Kemper Military School (2) (3) (4)

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* Colleges which are not included in the National Sophomore distribution.

(2) Colleges which gave the tests in 1932.

(3) Colleges which gave the tests in 1933.

(4) Colleges which gave the tests in 1934.

Missouri Valley College (3) (4)
Park College (2) (3) (4)
Stephens College (2) (3) (4)

MONTANA
*Carroll College (3) (4)

NEBRASKA
*Municipal University of Omaha
Scottsbluff Junior College (3) (4)

NEW JERSEY
Drew University (2) (3) (4)
Georgian Court College (3) (4)

NEW MEXICO
*University of New Mexico

NEW YORK
Sarah Lawrence College (4)
Oswego Normal School (4)
University of Buffalo (2) (3) (4)

NORTH CAROLINA
Barber-Scotia Junior College (4)

OHIO
Antioch College (2) (3) (4)
Fenn College
*Kenyon College (4)
Muskingum College (3) (4)
*Otterbein College (4)
Wittenberg College (2) (3) (4)

OKLAHOMA
Muskogee Junior College (2) (3) (4)

OREGON
Oregon State Normal School (3) (4)

PENNSYLVANIA
Marywood College (3) (4)
Penn Hall Junior College (3) (4)
Penn State College (4)
Rosemont College (3) (4)
St. Thomas College (2) (3) (4)

RHODE ISLAND
Rhode Island College of Education (3) (4)

SOUTH CAROLINA
The Citadel
*Presbyterian College (3) (4)

SOUTH DAKOTA
Augustana College (4)

TENNESSEE
Knoxville College (3) (4)
Southwestern (2) (3) (4)
*Tusculum (2) (3) (4)
Ward-Belmont School (2) (3) (4)

TEXAS
Paris Junior College (3) (4)
Texas Christian University (2) (3) (4)

VERMONT
Bennington College

WASHINGTON
State Normal School, Bellingham (3) (4)

WEST VIRGINIA
Bethany College (2) (3) (4)

The Tests Used.—The tests used in the 1935 program include the following Cooperative tests: English, Series 1, Literary Acquaintance, General Culture, General Science for College Classes, General Mathematics for College Classes, Contemporary Affairs, French, Spanish, German, Latin, Physics, Chemistry, Zoology, and Botany. These tests are described in some detail in the EDUCATIONAL RECORD for October, 1933, and October, 1934, and in the announcement of the Cooperative Test Service, 500 West 116th Street, New York City.

Combinations of Tests Used.—Not all of the tests listed above were given in all participating colleges. While most of the colleges gave the General Culture, English, and Literary Acquaintance tests, and a majority the General Science and Contemporary Affairs tests, the combinations of tests used in many colleges varied markedly.

Classes Tested.—Nearly all of the participating colleges gave one or more of the tests listed to the sophomore class; six colleges gave some of the tests to all students in all four college classes. Three colleges tested apparently all students in three classes, and nineteen colleges gave one or more tests to the students in two classes.

While institutional comparisons are not an important concern of the committee, all colleges were asked to indicate what portion of each class was tested. The answers received are not complete enough to warrant more than a presumption that the pupils tested represent a random sampling of the classes in most of the participating colleges. These uncertainties regarding the class and institutional representativeness of the groups tested and the variety of combinations of tests used in each institution should be kept in mind in interpreting the data presented below.

III. SOPHOMORE TEST RESULTS

In this report, the results of the few simple tabulations that have been made will be presented very briefly, with a minimum of interpretation and comment. For the sake of brevity, the tabulations are presented and discussed without reservations regarding the validity of the tests, but the reader should remember throughout that the committee is conscious of the limitations of the tests used.

As already indicated on preceding pages, the detailed analysis of the results of the tests for each college was left to those most conversant with the local situation and those who are, therefore, most able to make useful analyses—the officers in each college. The results of the tests will be valuable to the extent that they are analyzed in the light of local conditions, and to the extent that such analyses are brought to bear upon the fundamental problem of giving to each individual student a more effective type of educational guidance. From this viewpoint, the most important part of this section of the report will be Table 1 (page 449), since this table will enable each institution to interpret the score of each student on each part of each test in terms of national percentiles. From the viewpoint of the committee, such study of individual students is vastly more important for education than the comparisons of institutions, types of institutions, professional goal groups, and classes, made below. The committee hopes that the large amount of space necessarily taken by even a brief presentation of such comparative data will not raise them in the eyes of the reader from the minor position which they occupy in the committee's whole program.

National Sophomore Percentile Scales.—Table 1 will enable each college to determine, within the limits of the sample available to the committee, the national standing of each student who took one or more of the tests. In view of the large differences among colleges, it may be more convenient for purposes of local analysis for each college to construct similar scales based entirely on local returns. This suggestion is made particularly to those colleges whose averages are far from the national average. This table shows national percentile scores for each of the most widely used of the tests given in April and May, 1935.

The data on college grades were obtained from the participating colleges in accordance with the following directions:

> "In column 20 please write the average college grade in all subjects. The average grade should be based upon all grades that are on the official records of the registrar's office at the time this form is filled out. This means that the averages will not include grades for the current semester unless the mid-semester marks are available when this form is filled out. It is requested that in reporting the average grade the code given below be used. This code is necessary because different institutions use different symbols for grades, some using letter grades, A-B-C-D-F or E-G-F-P, etc., and some using percentages. In order to maintain comparability as far as possible between the grades for different institutions please transmute whatever system of grades you use into marks of Excellent, Good, Fair, Poor, and Probation. In some institutions only students who receive 95 or above may be considered excellent. In other institutions a student receiving an average of 85 may be considered excellent. The intermediate points in the code, namely, 2, 4, 6, and 8, are provided in order to permit adjustments

TABLE 1—National percentile scales for the tests given in April and May, 1935, to college sophomores. The scales are based upon returns from all sophomores tested, regardless of curricular division or type of institution, for whom reports were received up to June 10, 1935. These tables show true percentiles, calculated from the distributions of scores.

Each score in each column shows the upper score limit of the percentile indicated at the extreme left and right of the line. For example, the bottom entry in the History and Social Studies column shows that all scores of 9 or below have a percentile value of 1; all scores from 10 to 14, inclusive, have a percentile value of 2; and all scores above 155 have a percentile value of 100. Many colleges used different combinations of tests, hence the numbers of cases and of colleges vary from column to column. The mean and sigma of the scores and the number of colleges involved in each column are shown at the top of each column.

	Hist. & S. S.	For. Lit.	Fine Arts	Total Gen. Cult.	Eng. Usage	Spell.	Vocab.	Total English	
No. of Cases......	4,679	4,679	4,679	4,679	4,922	4,922	4,922	4,922	
No. of Colleges....	60	60	60	60	65	65	65	65	
Mean...........	66.7	54.6	41.8	163.2	68.2	31.2	47.1	146.4	
Sigma..........	31.9	33.2	28.3	81.7	17.5	13.6	17.4	41.7	
Percentiles									%iles
100	191	243	188	595	107	55	93	251	100
99	155	155	133	396	100	54	85	229	99
98	144	140	118	364	98	53	82	222	98
97	136	129	110	344	96	53	79	218	97
96	130	123	101	327	95	51	78	214	96
95	125	118	96	315	94	51	76	210	95
94	122	113	92	305	93	50	74	207	94
93	119	110	89	296	92	50	73	205	93
92	116	106	85	288	91	50	72	203	92
91	113	102	82	280	91	49	71	201	91
90	110	99	79	274	90	49	70	199	90
88	106	94	75	261	89	48	68	195	88
86	102	90	71	251	87	47	67	192	86
84	99	86	68	243	86	46	65	189	84
82	95	83	65	235	85	45	64	187	82
80	92	79	63	227	84	44	63	184	80
75	86	73	57	210	81	43	60	178	75
70	81	66	52	195	79	40	57	172	70
65	76	61	47	183	77	39	54	166	65
60	72	57	43	172	74	37	52	160	60
55	67	53	39	161	72	35	50	154	55
50	63	49	36	151	70	33	47	149	50
45	59	45	33	141	67	31	45	143	45
40	55	41	30	132	65	28	42	137	40
35	51	38	27	123	62	26	40	132	35
30	47	34	24	113	60	23	37	125	30
25	43	30	21	103	57	20	34	118	25
20	39	26	18	93	53	17	31	110	20
18	37	25	17	89	52	16	30	107	18
16	36	23	15	85	50	15	29	103	16
14	34	22	14	80	48	14	27	98	14
12	31	20	13	75	46	13	25	94	12
10	29	18	11	70	44	12	24	89	10
9	27	17	10	66	43	11	23	85	9
8	26	16	10	63	41	10	22	82	8
7	24	14	8	59	40	9	21	80	7
6	22	13	7	55	38	9	19	76	6
5	21	11	6	52	36	8	18	73	5
4	19	10	5	47	35	7	17	69	4
3	16	8	4	43	32	5	15	65	3
2	14	6	2	37	29	4	13	58	2
1	9	3	1	27	23	2	10	49	1

TABLE 1.—*Continued*

	Lit. Acq.	Cont. Aff.	Gen. Sci.	Gen. Math.	World History	College Grade	
No. of Cases	4,010	3,090	3,393	985	536	4,100	
No. of Colleges	62	41	39	22	10	55	
Mean	62.4	117.9	50.4	42.5	52.7	5.4	
Sigma	28.0	55.5	24.4	23.5	25.4	1.8	
Percentiles							%iles
100	167	365	170	146	120	9.0	100
99	136	286	125	119	116	9.0	99
98	127	264	114	109	113	9.0	98
97	121	249	107	100	107	8.9	97
96	116	238	102	94	105	8.8	96
95	113	229	98	88	103	8.7	95
94	110	221	94	84	101	8.6	94
93	108	210	91	81	98	8.5	93
92	105	204	88	79	95	8.4	92
91	103	199	85	76	92	8.3	91
90	101	193	83	74	90	8.2	90
88	98	184	79	71	84	8.0	88
86	95	177	76	68	82	7.8	86
84	92	170	73	65	80	7.7	84
82	89	164	71	62	77	7.6	82
80	86	159	68	60	74	7.5	80
75	80	146	63	54	69	7.2	75
70	76	137	59	50	64	6.9	70
65	71	129	56	46	61	6.6	65
60	67	122	53	43	57	6.4	60
55	63	115	49	40	53	6.1	55
50	60	108	47	38	50	5.9	50
45	56	102	44	36	46	5.7	45
40	52	96	41	33	43	5.5	40
35	49	90	39	30	39	5.3	35
30	45	84	36	28	36	5.1	30
25	41	78	33	25	33	4.8	25
20	37	72	30	23	29	4.4	20
18	36	70	29	22	28	4.2	18
16	34	67	27	21	26	4.0	16
14	32	64	26	20	25	3.9	14
12	30	61	25	19	23	3.6	12
10	28	57	23	18	22	3.4	10
9	27	55	22	17	21	3.3	9
8	26	53	21	16	20	3.2	8
7	25	50	20	15	19	3.1	7
6	23	48	19	15	18	3.0	6
5	21	44	17	14	17	2.7	5
4	20	41	16	12	16	2.4	4
3	18	37	14	11	15	2.1	3
2	16	32	12	9	13	1.8	2
1	12	25	8	7	11	1.4	1

where there is some doubt regarding the group in which the student's average places him.

Code for Average College Grades:

9 Excellent
8
7 Good
6
5 Fair
4
3 Poor
2
1 Probational or Failing"

TABLE 2.—College sophomore percentiles for indicated tests and types of colleges. This table, while abbreviated, is parallel to Table 1 and is to be read in the same way.

LIBERAL ARTS COLLEGES

	General Culture	Total English	Literary Acquaintance	Contemporary Affairs	General Science	
No. of Colleges.	39	42	38	26	25	
No. of Cases...	3,237	3,395	2,614	1,836	2,042	
Mean.........	169.5	147.2	63.7	124.8	53.1	
Sigma........	82.9	42.1	28.3	60.1	26.1	
Percentiles						%iles
100	590	251	167	365	170	100
98	375	224	129	277	117	98
93	303	207	110	230	98	93
90	281	201	103	207	89	90
84	250	191	93	183	78	84
80	235	186	88	173	73	80
75	218	179	82	160	68	75
70	203	173	77	147	63	70
60	179	161	68	130	56	60
50	158	150	61	115	49	50
40	137	138	53	102	43	40
30	119	125	46	88	37	30
25	108	118	42	81	34	25
20	97	110	39	74	31	20
16	89	102	35	68	28	16
10	75	89	29	58	23	10
7	66	80	26	48	20	7
3	48	64	19	34	13	3
1	33	50	14	23	9	1

TEACHERS COLLEGES

No. of Colleges.	5	6	6	4	6	
No. of Cases...	628	778	647	813	890	
Mean.........	157.9	149.1	59.5	108.5	48.1	
Sigma........	77.8	38.1	27.3	48.4	20.2	
Percentiles						%iles
100	490	230	154	365	159	100
98	344	220	118	233	103	98
93	288	201	102	188	77	93
90	267	196	98	169	73	90
84	235	189	88	150	66	84
80	221	184	83	141	63	80
75	206	178	79	130	58	75
70	188	173	74	122	55	70
60	166	163	66	110	49	60
50	146	152	56	99	45	50
40	129	140	49	90	42	40
30	110	129	41	79	37	30
25	102	122	38	74	35	25
20	92	115	34	70	32	20
16	82	109	32	66	29	16
10	66	97	25	58	25	10
7	59	88	23	52	23	7
3	44	73	17	45	18	3
1	28	61	12	38	12	1

TABLE 2—*Continued*

JUNIOR COLLEGES

	General Culture	Total English	Literary Acquaintance	Contemporary Affairs	General Science	
No. of Colleges.	16	17	18	11	8	
No. of Cases. . .	814	749	749	441	461	
Mean.	141.8	140.2	60.4	106.5	43.2	
Sigma.	75.4	43.0	27.2	42.0	22.2	
Percentiles						%iles
100	480	230	146	281	143	100
98	328	221	124	211	97	98
93	265	201	106	176	79	93
90	246	194	99	160	74	90
84	211	184	88	143	64	84
80	197	179	82	137	59	80
75	184	173	77	132	55	75
70	169	168	72	126	51	70
60	148	154	64	112	45	60
50	132	142	58	102	40	50
40	115	132	51	91	34	40
30	98	119	44	82	30	30
25	89	112	41	76	27	25
20	77	103	37	72	25	20
16	67	96	33	67	23	16
10	50	79	27	57	19	10
7	43	70	23	51	16	7
3	28	54	18	40	9	3
1	18	38	12	27	6	1

Percentile Scales for Three Types of Colleges.—In answer to requests from several cooperating colleges, abbreviated percentile scales have been prepared for the most widely used tests for Liberal Arts Colleges, Junior Colleges, and Teachers Colleges, separately. These are presented in Table 2. The differences between these types of colleges are small in relation to the spread of scores within each type, and in relation to the differences between individual college averages within each type. While there is no evidence here of notable differences in the numbers of average, excellent, or "illiterate" pupils in these three types of colleges, it is obvious that the samplings are too small to afford conclusive indications. This reservation emphasizes the great desirability of a more extensive and more systematic participation of American colleges in a common testing program involving comparable tests year after year.

Equivalent Scores on 1934 and 1935 Tests.—The 1934 and 1935 forms of the Cooperative tests used in this program were originally made as closely equivalent as possible, but it is almost never possible to secure exact equivalence, regardless of how carefully the tests were originally made. For this reason the successive annual forms of the Cooperative tests are always experimentally checked for equivalence with the forms of the preceding year, and if, as frequently happens,

TABLE 3.—Equivalent scores of the 1934 and 1935 General Culture, General Science, English Series 1, Contemporary Affairs, and General Mathematics tests. Literary Acquaintance scores of 1934 and 1935 are so nearly equivalent that their inclusion in this table is unnecessary. To convert total General Culture scores, convert each of the three part scores, and summate them. Interpolation should be used to convert scores not shown in the table.

GENERAL CULTURE						ENGLISH SERIES 1							
I. History and Social Studies		II. Foreign Literature		III. Fine Arts		Usage		Spelling		Vocabulary		Total	
1934	1935	1934	1935	1934	1935	1934	1935	1934	1935	1934	1935	1934	1935
268	267	295	295	240	240	105	110	55	55	100	94	265	265
258	257	265	265	235	235	103	108	53	53	98	93	261	261
248	247	255	255	230	230	101	105	51	50	95	90	258	257
236	235	205	205	225	224	100	104	50	48	90	86	254	252
225	223	175	175	220	219	98	101	49	46	87	84	250	247
215	213	145	145	215	213	96	98	48	44	83	81	244	240
205	202	115	115	210	208	87	89	47	42	79	77	238	233
195	192	109	108	205	202	78	80	46	41	76	75	232	226
185	181	98	97	200	197	75	76	44	39	74	73	226	219
175	171	87	86	195	191	71	72	33	29	68	68	215	208
165	160	72	70	185	180	67	67	22	18	65	65	213	207
155	150	60	58	177	171	63	63	12	8	61	59	211	205
145	140	56	55	165	158	58	57	10	7	56	53	209	204
135	130	51	51	155	147	55	54	8	5	48	45	195	191
121	116	46	47	150	141	49	47	4	2	44	43	183	180
111	105	41	43	135	125	44	42	2	1	35	34	174	171
100	94	37	40	130	119	39	38	1	0	24	23	164	160
92	86	32	36	120	108	30	29			13	12	159	154
85	78	26	31	113	100	20	19			6	6	155	149
75	68	21	25	100	86	12	11			0	0	141	135
70	62	15	18	95	82	7	7					130	125
65	57	10	12	91	79	0	0					120	115
57	50	5	6	85	74							110	105
51	45	0	0	80	70							100	95
40	35			75	66							90	85
31	27			70	62							80	75
23	20			65	58							70	65
17	15			61	55							55	50
11	10			55	50							45	40
0	0			50	46							35	30
				45	42							29	25
				40	38							22	20
				20	19							17	15
				10	10							9	9
				0	0							0	0

TABLE 3.—*Continued*

Contemporary Affairs	General Science	General* Mathematics	Contemporary Affairs	General Science	General* Mathematics
1934 1935	1934 1935	1934 1935	1934 1935	1934 1935	1934 1935
306—470	267—280	122—120	167—202	156—141	8—6
305—375	259—270	99— 97	165—199	148—131	4—3
295—363	250—260	83— 81	160—192	131—113	0—0
285—351	244—252	64— 62	155—186	123—107	
275—339	241—248	57— 55	145—174	119—104	
265—327	235—242	54— 51	140—168	115—101	
255—315	233—239	50— 46	120—146	111— 98	
245—303	229—233	47— 42	105—130	106— 94	
235—291	226—229	45— 39	95—118	101— 90	
225—279	220—221	44— 37	90—112	96— 86	
215—267	216—216	42— 34	45— 65	91— 82	
208—258	208—206	40— 31	35— 54	86— 78	
205—254	204—201	36— 26	27— 44	81— 74	
199—246	196—191	33— 24	24— 40	75— 69	
193—238	192—186	30— 22	16— 30	68— 63	
187—230	184—176	20— 13	14— 27	61— 57	
182—223	180—171	17— 11	9— 20	51— 48	
180—220	172—161	15— 10	7— 17	42— 40	
175—213	168—156	13— 9	3— 11	21— 20	
172—209	160—146	11— 8	0— 4	0— 0	

* This table is for sum of Parts I, II, and III. Convert this sum and call Part IV equivalent for the two forms.

they are found not to be equivalent, tables of equivalent scores are constructed so that comparability may be maintained from year to year. Thanks to the cooperation of the University of Minnesota, the University of Louisville, and Texas Christian University, we are enabled to present tables of equivalent scores for the 1934 and 1935 General Culture and General Science tests. From other sources we are able to present a table of equivalent scores for the 1934 and 1935 English Series I, Contemporary Affairs, and General Mathematics tests. The 1934 and 1935 forms of the Literary Acquaintance test are equivalent. Table 3 will enable any college that used both the 1934 and 1935 tests to compare the students who took the tests in 1934 with those who took the tests in 1935. The equivalence of scores not shown in the table can be calculated by simple interpolation.

Percentile Scales of Foreign Language Tests.—Table 4 shows abbreviated percentile scales for indicated credit groups for each of the four foreign language tests based upon all returns available at the time of writing this report. The numbers of cases are small, and the scales should therefore be used

TABLE 4.—Foreign language test percentiles for indicated credit groups, including students from all four college classes. This table is to be read in the same way as Table 1. In view of the small numbers of cases, the percentiles are here given in abbreviated form.

	FRENCH				SPANISH			GERMAN			LATIN		
Years of College Credit....	1	2	3	4+	1	2	3+	1	2	3+	3	4+	
No. of Cases..............	562	692	274	77	168	168	61	257	250	65	76	128	
No. of Colleges...........	25	30	19	12	16	17	12	24	25	6	14	12	
Mean.....................	80	114	145	199	71	88	157	68	86	136	129	149	
Sigma....................	41.3	46.7	53.2	47.0	41.0	39.4	58.4	37.4	49.0	62.1	46.3	52.1	
Percentiles													%iles
100	226	255	268	270	281	196	271	186	247	257	246	271	100
98	186	220	242	270	166	181	269	159	213	256	227	254	98
93	154	190	222	259	131	147	238	129	162	228	204	230	93
90	141	179	214	256	115	137	232	123	151	222	193	215	90
84	122	162	202	247	103	128	218	108	137	204	179	199	84
80	111	153	195	241	97	119	204	99	130	200	164	192	80
75	102	145	187	234	93	114	197	91	118	182	156	185	75
70	95	137	179	229	88	108	188	84	108	178	152	174	70
60	82	122	159	219	80	96	174	71	95	155	144	162	60
50	73	111	145	211	70	88	162	62	79	125	128	152	50
40	62	99	131	189	56	76	147	55	68	110	107	142	40
30	54	87	116	180	48	65	126	47	55	93	96	128	30
25	50	81	107	165	42	60	109	42	49	82	90	114	25
20	46	73	94	150	37	55	105	36	44	76	83	101	20
16	42	66	86	139	33	46	93	32	38	67	81	90	16
10	36	55	72	124	27	36	72	26	29	55	71	74	10
7	31	49	66	118	18	30	66	23	23	51	67	64	7
3	21	38	45	105	6	25	39	10	15	44	56	54	3
1	11	28	29	101	2	13	23	3	8	33	43	41	1

cautiously. It is the hope of the committee that much larger numbers of the foreign language tests will be used in the 1936 program.

Variability of Achievement in Colleges.—The sixteen colleges included in Chart I were chosen to represent approximately the whole range of medians from the highest to the lowest, and all types of institutions giving the tests to sophomores and making returns in time for inclusion in this report. The indications of this chart are adequately summarized by the paragraphs describing the corresponding charts in the report of the 1932 and 1933 programs.

Chart I shows two types of variability; the first is the variability of median scores of different colleges, and the second is the more significant variability of scores of students in individual colleges. While both types of variability indicate the great need for more adequate educational guidance of students, both before and after they reach college, the second type more particularly defines the immediate opportunity of the colleges to serve those young people who have already

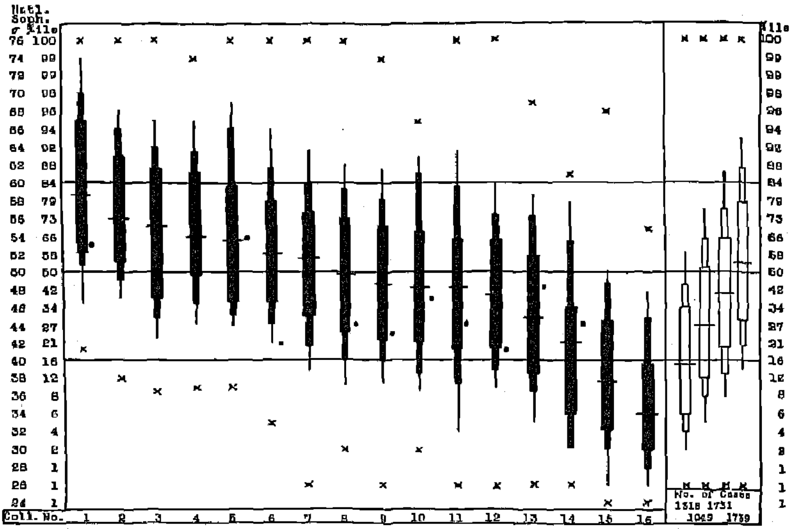


CHART I.—Variability of achievement in participating colleges as measured by the English test. The middle horizontal line shows the national median, and the other two are at the 16th and 84th percentiles of the national sophomore distribution. The percentile scale at the left is based on returns for 4,922 sophomores from 65 colleges that took this test and reported results in time for inclusion in the percentile table. Each bar represents an individual college. The wide portion of each bar represents the range of scores of the middle half of the sophomores in each college. The narrow parts extend to the 16th and 84th percentiles in each college. The lines at the end extend down to the 10th percentile and up to the 90th percentile. The crosses below the bars represent the lowest scores and those above represent the highest scores in the several colleges. The short cross line near the middle of each bar represents the median score of the college. The black dot adjacent to each bar indicates the average grade assigned by the college to the sophomores represented by the bar. Not all colleges reported average grades. The average college grade position is here graphed in terms of college grade national percentiles from the last column of Table 1.

While this chart is based entirely on percentiles, the scale has been altered to correspond roughly to a sigma scale, so that vertical distances are approximately comparable. The sigma scale is derived from the percentile scale.

The sixteen colleges included here are chosen to represent approximately the whole range of averages of the colleges that gave the English test. The numbers of cases in these sixteen colleges vary from 28 to 268.

been admitted, and also, in cooperation with the secondary schools, to serve similar groups of young people who are planning to come to college.

The differences among the colleges whose sophomores participated in this program, as indicated by the differences displayed on Chart I, are very large indeed, so far as achievement in spelling, usage, and vocabulary is concerned. Similar charts for the General Culture, General Science, and General Mathematics tests, which are omitted from this report to save space, indicate equally large differences in each of these fields.

Chart I is particularly interesting because of the availability of comparable English test data on independent secondary school pupils, represented by the four bars at the extreme right of the chart. The median score of 1,739 twelfth grade pupils in independent secondary schools is slightly above the national sophomore median. The sophomore class medians on the English test are below the median of the ninth grade in two colleges and below the median of the tenth grade in eight of the participating colleges. In one of these colleges, about 75 per cent of the sophomores are below the ninth grade median. In the college which secured the highest median score in the English test, about 15 per cent of the sophomores are below the twelfth grade median. The results on the General Culture, Foreign Language, General Science, and General Mathematics tests are adequately represented by this chart on the English test results.

Variability within Colleges.—These relations are of considerable portent for both the philosophy and practice of educational guidance throughout secondary school and college. In Chart I we are concerned with basic aspects of the native language. The spread of scores within a single college, from far below the ninth grade median of independent secondary schools to far above the national sophomore median, is of basic significance. If these indications are no more than approximately correct, the great need suggested is not so much a more ardent concern over the rectification of institutional standards as a humane ardor for finding and serving the needs of individuals in the heterogeneous and largely overlapping masses that now populate both secondary schools and colleges. It is obvious that, with such student bodies as here indicated, mass standards and "average performance" are not only irrelevant but ironical. It seems equally obvious that no

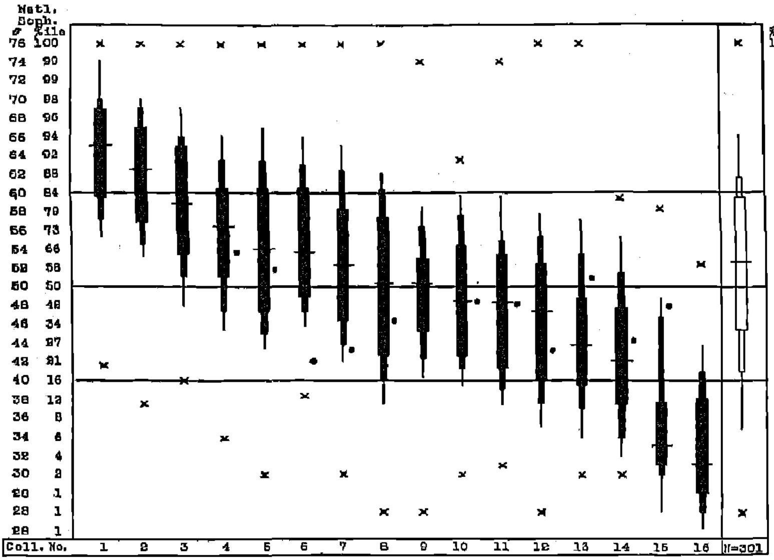


CHART II.—Variability of achievement in participating colleges as measured by the Contemporary Affairs test. This chart parallels Chart 1, and is to be read in the same manner. The open bar at the right represents the distribution of scores of 301 pupils in grades 9 to 12 in 11 independent secondary schools. A group of 410 pupils in grades 11 and 12 in 4 public high schools achieved an average equal to the lower quartile of the 301 independent school pupils.

simple and easy changes can be remotely adequate for making the readjustment demanded by the heterogeneity here exposed. Nothing short of a definite abandonment and repudiation of blanket prescriptions and unmitigated mass standards, and a genuine and whole-hearted acceptance of the fact of individual differences and their increasingly obvious administrative and guidance implications, would seem to be a sufficient reason for hopefulness in regard to this crucial social problem.

Contemporary Affairs Test.—Chart II shows that the colleges are as variable with regard to acquaintance with contemporary affairs as they are with regard to achievement in English, General Culture, Science, and Foreign Languages. The range of college averages in terms of national percentiles is greater in Contemporary Affairs than in English, and the spread of scores within colleges is approximately the same in

Contemporary Affairs as in English. Nine of the colleges in Chart II also appear on Chart I. In general, there is positive correlation between standing on the English and on the Contemporary Affairs test. The open bar at the right shows that 308 pupils in grades 9 to 12 in 11 independent secondary schools are as well acquainted with contemporary affairs as college sophomores. There is evidence elsewhere in this report that the distinction between colleges and secondary schools is not clear so far as the ability and achievement of the students are concerned (see Table 6 and sciences).

Variability of Grading Standards in Colleges.—The black dots at the right of several of the vertical bars in Charts I and II indicate the average college grades of the sophomore graphs represented by the bars. On Chart I, college No. 1, with over 85 per cent of its students above the national average, gives an average college grade to these students that is barely above the national average of college grades, and is actually slightly lower than the average grade in college No. 5. College 6, with a test average at the 58th percentile, gives its students an average grade at the 21st percentile; while college 13, with a test average at the 30th percentile, gives its students an average college grade at the 43rd percentile. Similar discrepancies appear on Chart II, notably in the cases of colleges 5 and 13, and 6 and 15. It is such differences as these which make the transfer problem, from college to college, and from college to graduate school, such an acute one, and which leads this committee to renew its suggestion regarding the use of comparable tests in dealing wth both inter- and intra-institutional problems of individual appraisal and adjustment.

Distributions of College Averages.—Table 5 confirms for all variables the indications of Charts I and II that colleges differ widely with respect to achievement of the types measured by the tests. On some of the tests, several colleges secure mean scores which are at or above the 84th percentile, while equal numbers of colleges secure mean scores at or below the 16th percentile. This means that in some colleges roughly

TABLE 5.—Distribution of college sophomore averages. The sophomore means of all colleges for which data were available are here distributed in terms of national sophomore percentiles. The percentile scale has been altered as in Chart 1, so that the intervals correspond approximately to a sigma scale. The vertical distances are therefore roughly comparable.

Natl. Soph. %iles	Age	Hist. & S. S.	For. Lit.	Fine Arts	Total Gen. Cult.	Eng. Usage	Spell.	Voc.	Total Eng.	Lit. Acq.	Cont. Aff.	Gen. Sci.	Gen. Math.	Coll. Grade	Natl. Soph. %iles
98–100												1			98–100
96– 97															96– 97
94– 95				1									2		94– 95
92– 93						1					1		1		92– 93
88– 91	1		2	2							1	3	3		88– 91
84– 87		1	2	1	2						2	3	1		84– 87
79– 83	2	1	3	2	3	1		1	2	4	1	1	3		79– 83
73– 78		2	5	7	6	1	1	5	1	8	5	1	3	2	73– 78
66– 72	7	5	7	7	6	2	2	5	6	7	4	2	3	1	66– 72
58– 65	5	11	8	7	6	15	5	10	10	6	2	9		5	58– 65
50– 57	7	19	8	11	15	7	13	7	10	9	8	6	1	7	50– 57
42– 49	11	5	10	6	7	15	23	15	14	17	7	5	3	9	42– 49
34– 41	13	9	7	5	3	11	12	10	10	4	4	4	2	14	34– 41
27– 33	9	3	5	3	6	4	7	5	6	6	2	3		8	27– 33
21– 26	5	2		4	4	4	1	4	3		1	1		8	21– 26
16– 20	5	2	1	4	1	1	1	1	1					1	16– 20
12– 15	8					2		1	1						12– 15
8– 11	1		1		1	1		1		1	2				8– 11
6– 7									1						6– 7
4– 5			1								1				4– 5
2– 3															2– 3
1															1
Total......	74	60	60	60	60	65	65	65	65	62	41	39	22	55	

half of the sophomores are in the highest 16 per cent of the national sophomore group, and in other colleges roughly half of the sophomores are in the lowest 16 per cent of the national sophomore group. Such differences, in conjunction with variable grading standards (Charts I and II), signify much for admissions officers who are considering applications for advanced standing, and for those who are engaged in constructive educational guidance. These data emphasize the need for supplementing present appraising devices with instruments which yield more objectve and more comparable measures.

Comparison of College Averages on the Foreign Language Tests.—Table 6 shows distributions of college averages on each of the Foreign Language tests for indicated college credit groups. The numbers of cases on which the averages actually included in the table are based are quite small, ranging from 1 to 110 or more, but since the averages (or single scores, as the case may be) represent the tested achievement of groups or of individuals officially placed in defined credit groups by the colleges, Table 6 seems to afford significant evidence on the variable meaning of college credits in the foreign languages.

It is apparent that even in a sequential subject-matter like French, groups that are officially equal in training or credit status are extremely variable in tested achievement. The distributions of college averages for the three credit groups overlap approximately in the same way and to the same extent as distributions of individual scores for successive credit groups or classes in a single institution. In several colleges the three-year groups are below the two-year average, and in several colleges the two-year groups are above the three-year average. In a few colleges the average for third-year students is below the average for second-year students in the same college. The positions of the dotted lines in the French test columns afford eloquent comparisons of achievement in the foreign languages in colleges and in highly selected secondary schools. (The medians for grades 10, 11, and 12, incidentally, coincide or almost coincide with the medians of entering college freshmen in selected institutions who had had two, three, and four years of high school French.) In more than

TABLE 6.—Distributions of college averages on the foreign language tests for indicated college credit groups. In computing college credits, one high school year was considered equivalent to one-half college year of credit. The numbers of cases on which the college averages are based range from 1 to 116; if all averages based on fewer than 5, or even 10, cases had been excluded, the relations indicated in this table would not be noticeably different. In the French test columns, the dotted lines indicate ninth, tenth, eleventh, and twelfth grade independent secondary school medians.

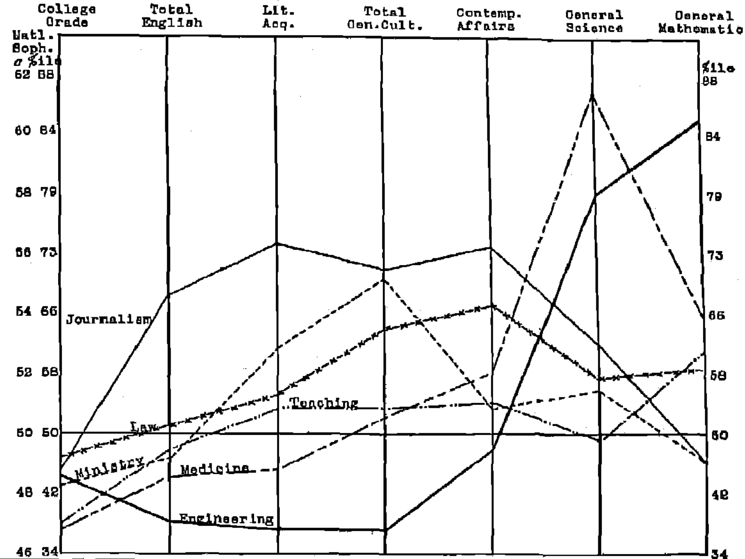
The table is to be read as follows: In the 1 to 1½ year column for French, one college secured an average score between 140 and 150; one college secured an average between 120 and 130; and so on to the bottom of the column where it appears that one college secured an average of between 20 and 30 score points. Referring to the dotted horizontal line, it appears that in most of the colleges the 1 to 1½ year college credit groups secured averages below the tenth grade median in a group of highly selected independent secondary schools.

The vertical brackets at the right of each distribution indicate the 25th, 50th, and 75th percentiles from Table 4.

Score	French				German			Spanish			Latin		Score
	Years of College Credit												
	1-1½	2-2½	3-3½	4+	1-1½	2-2½	3+	1-1½	2-2½	3+	3-3½	4+	
240						1		1					240
230			1	1								1	230
220				2									220
210				2				1				1	210
200			1	1			1			2	1	1	200
190										1	1	1	190
180				1						2		1	180
170			3	2		2					1	1	170
160		4	1										160
150			3	1		1			1		1	1	150
140	1	3	4		1					3	2	1	140
130		1	2	1	2	1	1		2	1	2		130
120	1	5	2		2	3						3	120
110		3	1			2	2	2	1	1	2		110
100	4	4		1	1	1	1			1		1	100
90	4	4	1		2	1	1		2		3		90
80	1	4				3		3	4		1		80
70	4	2			1	3		2	3				70
60	6				5	1		1	3	1			60
50	1				2	2		2	1				50
40					2	4							40
30	2				5			2					30
20	1												20
10								1					10
0					1			1					0
Total Colleges	25	30	19	12	24	25	6	16	17	12	14	12	

half the colleges the 1-1½ year college credit groups secure averages below, and in several far below, the median of tenth grade high school students; only four out of 30 colleges in the 2-2½ year college credit group secure averages above the eleventh grade high school median; and only two colleges in the 3-3½ year college credit group have averages above the twelfth grade high school median.

Comparison of Professional Goal Groups.—Chart III

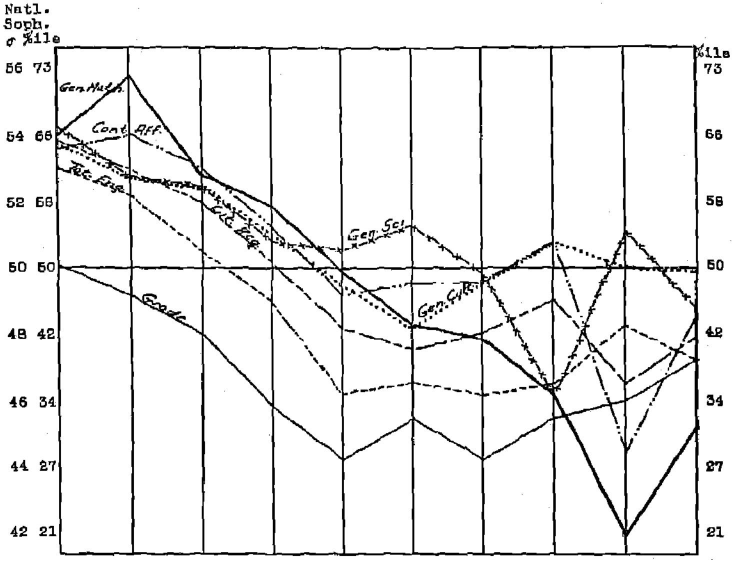


No. of Cases:							
Medicine	234	255	204	249	149	144	59
Law	176	222	155	207	107	119	40
Engineer'g	112	126	76	125	49	63	62
Ministry	145	163	110	147	57	106	6
Journalism	128	223	143	226	89	167	21

CHART III.—Comparison of professional goal groups. Graphs of means on indicated tests of college sophomores who reported their professional goals. The averages are graphed in terms of national sophomore percentiles arranged as in Chart I.

shows indicated test averages of sophomores grouped according to their reported professional goals. In order to avoid a multiplicity of lines in the chart, the averages of three groups, business, architecture, and agriculture, are omitted. The averages of the Business group on all variables are at or near the national median; the numbers of cases in the architecture and agriculture groups are too small to be significant.

Chart III affords several interesting contrasts. In general, the medicine and engineering aspirants are relatively high in Science and Mathematics, and low in English, Literary Acquaintance, General Culture, and Contemporary Affairs; while the journalism, law, and ministry groups are low in Science and Mathematics, and high (with minor exceptions) in the other tests. The pre-journalists take highest place in English,



N

Age Group	17	18	19	20	21	22	23	24	25	26
Gen. Cult.	92	698	1827	1168	432	167	99	51	33	82
Tot. Eng.	92	705	1814	1239	492	207	122	68	39	96
Cont. Aff.	61	414	1128	811	332	125	68	41	14	45
Gen. Sci.	47	380	1314	886	351	153	65	45	33	72
Gen. Math.	20	146	375	237	102	50	22	8	5	15
Lit. Acq.	84	577	1527	1026	371	148	88	48	27	74
Grade	89	666	1525	953	401	173	101	52	34	81

CHART IV.—Comparison of age groups. Means of chronological age groups of sophomores on indicated variables, graphed in terms of national sophomore percentiles arranged as in Chart 1. Since the national distributions show varying degrees of positive and negative skewness, the means as here graphed appear too high for some variables and too low for others. However, it is the direction of the lines, rather than their height on the chart, that is significant here.

Literary Acquaintance, General Culture, and Contemporary Affairs. All pre-professional groups secure average college grades below the national average, the teaching and medical groups being lower in average college grades than any other group.

All pupils in each professional group that took the indicated tests are included in this chart. Since some colleges did not use some of the tests, the numbers of cases vary from test to test. For this reason the indications should be interpreted with cautious reservations.

Comparison of Age Groups.—Chart IV shows the familiar negative correlation between chronological age and tested achievement. The negative correlation is fairly consistent for all variables from age 17 to 22, after which the relation becomes indeterminate.

In Chart IV means are graphed in terms of national percentiles, and since the national distributions show varying degrees of positive and negative skewness, the lines connecting the averages of the different tests are rather widely separated, some appearing too high and some too low, according to the degree and direction of skewness. Similar but less obvious discrepancies appear in some of the other charts. Throughout this report an effort has been made to make all comparisons in terms of national sophomore percentiles, partly because of the more widespread familiarity with the percentile scale, and partly because of the lesser expense of preparing the report in this way. In calculating the averages of subgroups, as of a college, or an age or professional group, it has been less expensive and more expeditious to calculate means rather than medians, hence the unusual procedure of charting and tabulating means in terms of percentiles, arranged to approximate a sigma scale, as in Chart I. However, the apparent distortion would have been as great if we had derived percentile from sigma scales, instead of the reverse; and for those who may wish to make more exact statistical analyses, the national means and sigmas for each variable are given in Table 1.

Comparison of Men and Women Sophomores.—Chart V indicates that the women are superior in college grade, English, Literary Acquaintance, and General Culture, slightly inferior in Contemporary Affairs, and notably inferior in General Science and General Mathematics.

Relations Between 1934 and 1935 Standings of Colleges That Participated in Both Programs.—The fact that many colleges participated in both the 1934 and 1935 programs makes possible some very interesting comparisons of the relative standings of the 1934 and 1935 sophomore classes in these colleges. The relations are summarized in terms of correlations in Table 7. The correlation coefficients for 1934-

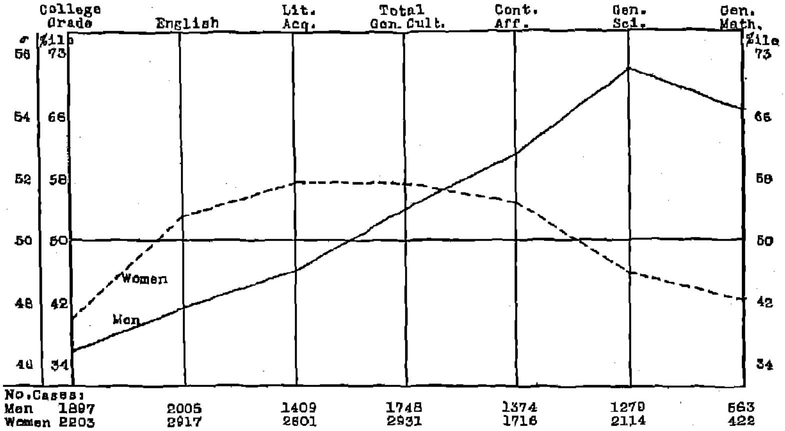


CHART V.—Comparison of men and women sophomores. Graphs of means on indicated tests of men and women. The averages are graphed in terms of national percentiles arranged as in Chart I.

TABLE 7.—Correlations between 1934 and 1935 sophomore averages of colleges that participated in both programs, with corresponding correlations for 1933-34 and 1932-33. Data on some of the variables were not available for all colleges, hence the numbers of pairs of averages vary from test to test. (Cf. EDUCATIONAL RECORD, October, 1933 and October, 1934.)

Variable	N (No. of Pairs of College Averages)	Correlations 1934–1935	Corresponding Correlations 1933–1934	Corresponding Correlations 1932–1933
Chronological Age	58	0.75	0.85	0.82
College Grade	45	0.55	0.51	0.44
Tests:				
History and Social Studies	50	0.80	0.83	0.65
Foreign Literature	50	0.90	0.91	0.54
Fine Arts	50	0.90	0.90	0.68
Total General Culture	50	0.88	0.90	
Usage	54	0.81	0.76	
Spelling	54	0.77	0.74	
Vocabulary	54	0.88	0.77	
Total English	54	0.88	0.79	0.68
Literary Acquaintance	49	0.69	0.74	
Contemporary Affairs	22	0.71		

1935 standings are not very different from corresponding coefficients for 1933-1934, except that the chronological age coefficient is ten points lower, and coefficients for vocabulary and total English are about ten points higher. These differences are probably due to chance and sampling differences. The lowest correlation coefficient is that for average college grade, as in 1933-1934 and in 1932-1933.

IV. COMPARISON OF COLLEGE CLASSES

College Class Percentiles.—From some points of view the most interesting and significant data yielded by the 1935 testing program are those which enable us to compare two or more classes in the same college or group of colleges. About two dozen colleges tested significant numbers of students in at least two classes, but only six colleges tested students in all four classes. Abbreviated percentiles for the consolidated classes in these colleges are shown in Table 8. These percentiles are given for their general interest and to enable these colleges to study their individual students in the four classes in terms of their own class percentiles. The small numbers of colleges and cases involved in Table 8 make these percentiles less significant than those in Table 1, but they may be of service in special studies undertaken in the colleges that have made this interesting table possible. The committee suggests that larger numbers of colleges test all four classes in the 1936 program.

Overlapping of College Classes.—The overlapping of college classes indicated in Table 8 is shown graphically in Chart VI. In general, the class medians rise from freshman to senior classes, except that the junior median in Literary Acquaintance is lower than the sophomore median, and in General Science and General Mathematics the senior medians are much lower than two or more of the other class medians. These recessions are partly, and perhaps largely due to inadequate sampling, but even so they are quite significant.

Of far greater significance, however, is the fact that even the largest differences in medians are small in comparison

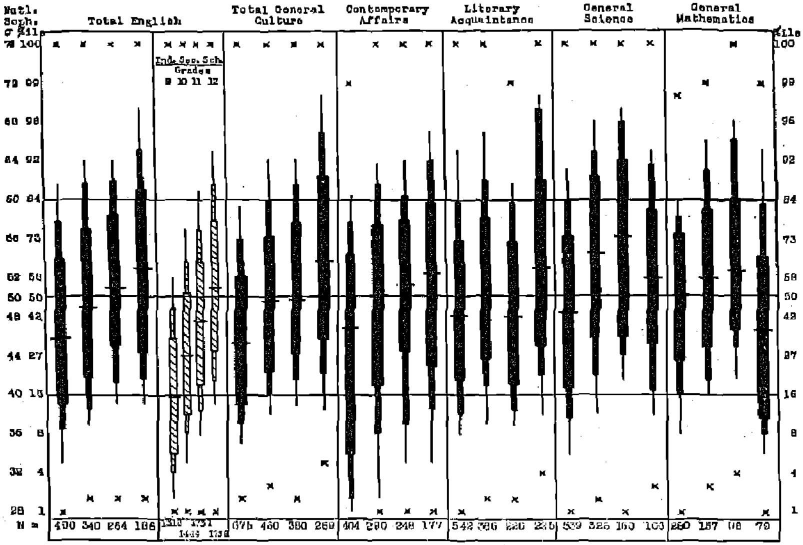


CHART VI.—Comparison of college classes. Graphs of scores on indicated tests of freshmen, sophomores, juniors, and seniors in the six colleges that tested all four classes. The class percentiles are graphed in terms of national sophomore percentiles arranged as in Chart 1. All available cases on each test have been added. Varying numbers of the six colleges either omitted or made optional the General Science and General Mathematics tests in one or more of the classes; hence the indications from these tests should be taken with caution.

For comparative purposes, the distributions of comparable English test scores of *ninth, tenth, eleventh, and twelfth* grade classes in independent secondary schools are graphed beside the English test graphs of the college classes. (Cf. Chart 1.)

with the variability of the classes, and the further fact that the variability is approximately equal in all classes. In a basic subject matter such as English there are about half as many very good students in the freshman as in the senior class, and about half as many very poor students in the senior class as in the freshman class. The near-equality of the class medians might appear acceptable if the senior distribution were truncated at the bottom. The presence in the senior class, as in the freshman class, of so many students below the tenth grade median for independent schools, is enough to give one pause; and the fact can hardly be explained except on the ground that time-serving, rather than achievement,

TABLE 8.—Freshman, sophomore, junior, and senior class percentiles based on all returns from six colleges that gave the tests to all four classes.

	Total General Culture				Total English				Literary Acquaintance				
No. of Cases	675	460	380	269	490	340	264	186	542	386	226	225	
Mean	133	163	170	201	131	144	152	157	60	65	58	74	
Sigma	71.6	87.6	85.4	105.9	46.0	43.9	40.8	45.5	30.8	31.7	26.9	35.4	
Class	Fresh.	Soph.	Junior	Senior	Fresh.	Soph.	Junior	Senior	Fresh.	Soph.	Junior	Senior	
Percentiles													%iles
100	469	518	549	565	232	244	235	253	173	167	133	173	100
98	327	404	392	474	222	226	231	237	135	142	121	149	98
93	256	307	313	380	201	208	209	224	112	121	99	132	93
90	235	284	283	360	193	203	203	218	106	113	95	125	90
84	202	239	253	312	182	193	194	205	90	97	90	117	84
80	185	223	234	297	175	187	190	198	83	91	83	107	80
75	168	206	218	261	167	179	184	191	77	85	77	96	75
70	154	189	204	241	159	168	177	185	71	78	73	89	70
60	133	167	177	210	145	156	164	174	60	68	59	80	60
50	116	145	149	180	130	145	153	162	54	60	54	68	50
40	103	126	130	155	117	131	144	148	46	53	46	60	40
30	86	107	116	132	103	116	134	129	40	45	41	52	30
25	79	98	109	120	97	111	126	122	37	42	36	46	25
20	73	91	100	109	90	102	116	115	33	39	32	42	20
16	68	85	92	96	84	96	107	109	30	36	31	38	16
10	58	73	79	76	72	86	98	97	25	27	27	30	10
7	51	66	72	68	64	77	92	86	22	25	24	27	7
3	40	52	60	58	45	67	71	66	17	19	19	21	3
1	31	38	36	48	35	54	52	54	11	14	15	19	1

TABLE 8.—*Continued*

	Contemporary Affairs				General Science				General Mathematics				
No. of Cases	404	290	248	177	539	328	160	106	280	157	98	79	
Mean	95	115	118	128	47	60	65	55	40	47	51	38	
Sigma	59.0	64.6	56.5	67.5	25.0	28.8	30.5	26.5	20.2	25.0	28.1	23.7	
Class	Fresh.	Soph.	Junior	Senior	Fresh.	Soph.	Junior	Senior	Fresh.	Soph.	Junior	Senior	
Percentiles													%iles
100	283	339	306	342	145	170	142	171	108	119	151	116	100
98	239	274	240	294	108	127	127	110	92	111	128	94	98
93	191	229	211	233	90	105	114	99	72	95	102	82	93
90	173	198	201	223	81	101	107	89	64	83	92	79	90
84	152	177	173	201	72	89	99	83	58	72	83	63	84
80	142	167	161	181	66	84	94	75	55	67	73	61	80
75	133	150	152	167	62	80	90	69	54	60	65	48	75
70	122	141	142	158	58	72	85	66	50	56	63	42	70
60	107	124	126	141	51	63	70	58	43	45	48	37	60
50	94	108	114	123	43	58	62	51	38	41	43	31	50
40	77	92	104	105	37	52	54	45	34	36	39	28	40
30	58	80	91	85	32	42	44	40	29	30	32	23	30
25	46	71	83	77	29	38	38	37	25	28	31	18	25
20	36	61	68	70	26	34	36	32	23	25	29	17	20
16	28	52	56	62	24	31	34	28	21	23	28	16	16
10	19	32	41	43	18	25	31	24	16	21	23	14	10
7	15	24	30	33	16	22	26	22	13	18	21	13	7
3	10	13	19	21	8	13	17	18	11	13	15	9	3
1	4	7	13	14	5	11	7	14	6	10	11	5	1

furnishes the basis of promotion from freshman to senior class. It is more than probable that these students achieve social and some intellectual values in passing from the freshman to the senior class; but it seems clear that whatever the nature of these values may be, they are not dependent upon the type of literacy measured by the English test used in this program. Nearly a third of the college seniors in these six colleges are below the median of the freshmen, more than a third of the seniors are below the twelfth grade independent school median, about a fifth of the college seniors are below the tenth grade median, and about five per cent are below the ninth grade median.

The evidence from all these tests, as summarized in all preceding tables and charts, indicates that the basis of credits and of classification of students within colleges is very similar to the basis on which institutional accreditation was granted prior to the recently promulgated changes of the North Central Association (see page 9, report of 1934 program, EDUCATIONAL RECORD, October, 1934). It is obvious that both individual credits and institutional accreditation have been granted on the basis of conditions, influences, and conduct which, although important for certain purposes, are far from being determiners or adequate criteria of the types of achievement measured by the tests used in this program. It seems clear from the available evidence that institutional accreditation is at least as well founded and as accurately and consistently administered as the granting of credits to individual students within institutions. The ambiguities of institutional accreditation have derived from the same weakness as the ambiguities of credits within single institutions—the subjectivity, lack of comparability, and partial irrelevance of the measures used. The committee views with hopefulness the reforms in accreditation procedures recently adopted by the North Central Association.

V. THE COLLEGE SCIENCE TESTING PROGRAMS

As indicated in the 1934 report, among the most promising developments in education are the science department testing programs growing out of the sophomore surveys of past years. The extensive physics program of 1934 has been continued this year; and the programs in chemistry, zoology, and botany have been expanded to include a somewhat larger number of colleges and students. But perhaps the most significant development during the last year has been the establishment of closer cooperative relations with various departmental associations. Committees have been appointed by the chemistry and zoology associations to collaborate with the Committee on Educational Testing and the Cooperative Test Service in the construction and improvement of tests, and to assist in planning and carrying out testing programs suited to the needs of these departments. Equally gratifying is the appointment of a Committee on Tests by the Mathematics Association of America. The Committee on Educational Testing is confident that, with the aid and guidance of these departmental committees, the testing programs in chemistry, zoology, and mathematics will soon become as extensive and significant as the physics program has become under the leadership of the American Association of Physics Teachers Committee on Tests.

THE PHYSICS TESTING PROGRAM

Participating Colleges.—The number of colleges participating in the physics program in 1935 was 274; of these, 132 sent in their reports in time to be included in this report. Since the names of all participants are included in the full report of the physics testing program (*American Physics Teacher,* Supplement, September, 1935), and since space in this report is available only for a brief summary of the results of the program, the list of colleges is not included here.

The Tests.—The tests were constructed to sample the content of elementary physics and to permit the making of comparable forms. Thus companion forms might be used before and after any given course in elementary physics to measure growth in the subject, and the difference obtained could be regarded as a tentative norm of expectancy for future classes.

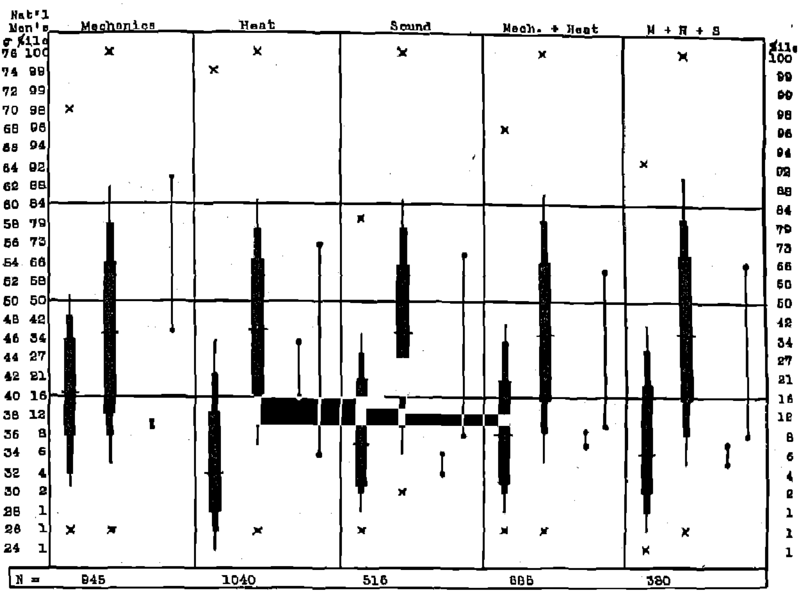


Chart VII.—Pre- and post-study comparisons for Light, Electricity, and Modern Physics. The two bars at the left of each section represent distributions of scores of all students who took the tests both before and after study. The two following lines connect dots representing the pre- and post-study means for the two colleges having the smallest and largest gains in each topic.

The availability of comparable forms has made possible the very interesting and illuminating study of growth in physics achievement during one semester, presented above in Chart VII. Originally the topics of mechanics, heat, and sound were planned for one combined form, and light, electricity and modern physics for the other. Subsequently, however, in answer to demands for atypical combinations, six topics were printed separately as follows: Mechanics, 54 items, 60 minutes; Heat, 30 items, 30 minutes; Sound, 16 items, 20 minutes; Light, 35 items, 40 minutes; Electricity, 44 items, 50 minutes; Modern Physics, 19 items, 25 minutes. Since specialization in physics usually follows and is predicated upon the elementary course, it is recommended that departments continue to use combinations of the topics for diagnostic purposes and for identifying students whose general grasp of elementary

TABLE 9.—National percentiles for men on physics tests, Mechanics, Heat, Sound, Light, Electricity, and Modern Physics, and four combinations of these topics. To be read in the same way as Table 1.

	Mech.	Heat	Sound	Mech. + Heat	Mech. + Heat + Sound	Light	Elec.	Mod. Phys.	Light + Elec.	Light + Elec. + Mod. Phys.	
No. Cases	4962	4887	3631	4458	3074	3619	3903	1510	3340	1424	
Mean	18.8	14.4	7.5	33.4	40.8	12.2	17.9	4.6	30.0	35.4	
Sigma	9.6	5.8	3.4	14.4	17.2	5.8	7.6	3.4	12.3	14.3	
Percentiles											%iles
100	51	30	16	78	94	35	43	19	73	88	100
99	44	27	15	69	83	27	37	14	63	74	99
98	41	26	(15)	66	79	25	35	13	58	69	98
97	39	25	14	63	76	24	33	12	55	66	97
96	38	(25)	(14)	61	74	23	32	11	54	64	96
95	36	24	13	60	72	22	(32)	(11)	52	62	95
94	35	(24)	(13)	58	70	(22)	31	(11)	51	60	94
93	34	23	(13)	57	69	21	30	10	50	59	93
92	(34)	(23)	12	55	66	(21)	(30)	(10)	49	58	92
91	33	(23)	(12)	54	(66)	20	29	(10)	48	57	91
90	32	22	(12)	53	65	(20)	28	9	47	55	90
88	30	21	(12)	51	63	19	27	(9)	45	53	88
86	29	(21)	11	49	61	(19)	(27)	8	44	51	86
84	28	20	(11)	48	58	18	26	(8)	43	50	84
82	(28)	(20)	(11)	47	57	(18)	25	(8)	41	48	82
80	27	(20)	10	45	55	17	(25)	(8)	40	47	80
75	25	19	(10)	43	52	16	23	7	38	44	75
70	23	18	9	41	49	15	22	6	36	41	70
65	22	17	(9)	38	47	14	20	(6)	34	39	65
60	20	16	8	36	44	13	19	5	32	37	60
55	19	15	(8)	34	42	12	18	(5)	30	36	55
50	18	14	7	33	40	(12)	17	4	29	34	50
45	17	(14)	(7)	31	37	11	16	(4)	27	32	45
40	16	13	6	29	35	10	15	3	26	30	40
35	14	12	(6)	27	33	(10)	14	(3)	24	29	35
30	13	11	5	25	30	9	13	2	23	27	30
25	12	10	(5)	23	28	8	12	(2)	21	25	25
20	10	9	4	21	25	7	11	(2)	19	23	20
18	(10)	(9)	(4)	20	24	(7)	(11)	1	(19)	22	18
16	9	8	(4)	19	23	6	10	(1)	18	21	16
14	(9)	(8)	(4)	18	22	(6)	(10)	(1)	17	20	14
12	8	7	3	16	21	(6)	9	(1)	16	19	12
10	7	(7)	(3)	15	19	5	(9)	0	15	18	10
9	(7)	6	(3)	14	18	(5)	8	(0)	(15)	(18)	9
8	6	(6)	(3)	13	(18)	4	(8)	(0)	14	17	8
7	(6)	(6)	2	(13)	17	(4)	(8)	(0)	(14)	16	7
6	5	5	(2)	12	16	(4)	7	(0)	13	(16)	6
5	4	(5)	(2)	11	15	3	(7)	(0)	12	15	5
4	(4)	4	1	10	14	(3)	6	(0)	11	14	4
3	3	(4)	(1)	9	13	2	5	(0)	10	13	3
2	2	3	(1)	8	11	(2)	4	(0)	9	12	2
1	0	2	0	5	9	0	3	(0)	7	10	1

physics is unusual. This practice seems more reasonable for the selection of advanced students and even for identifying special interests than one which would restrict measurement too narrowly to those topics of peculiar interest to a given instructor.

National Percentiles.—Tables 9 and 10 show national per-

TABLE 10.—Abbreviated percentile tables for women on the college physics tests, paralleling Table 9 for men.

	Mech.	Heat	Sound	Mech. + Heat	Mech. + Heat + Sound	Light	Elec.	Mod. Phys.	Light + Elec.	Light + Elec. + Mod. Phys.	
No. Cases	711	693	458	662	393	482	446	136	304	128	
Mean	14.7	11.6	7.3	26.4	33.9	12.3	14.9	3.7	25.4	28.0	
Sigma	7.5	5.1	3.1	11.6	13.7	6.0	6.1	2.8	10.4	11.4	
Percentiles											%iles
100	53	30	15	83	84	33	39	12	57	63	100
98	31	23	13	55	69	26	30	11	50	52	98
93	26	20	12	44	56	21	24	8	41	46	93
90	24	18	11	41	52	20	23	(8)	39	43	90
84	22	17	(11)	38	47	18	21	7	36	40	84
80	20	16	10	35	45	17	20	6	34	38	80
75	19	15	(10)	33	41	16	19	5	32	36	75
70	18	14	9	31	40	15	17	(5)	30	34	70
60	16	13	8	28	37	13	16	4	27	30	60
50	14	12	7	25	33	12	14	3	24	27	50
40	12	10	(7)	23	30	10	13	(3)	22	23	40
30	11	9	6	20	27	9	12	2	20	22	30
25	9	8	5	19	25	8	11	(2)	18	21	25
20	8	7	(5)	17	22	7	10	1	17	20	20
16	(8)	6	4	15	20	6	9	(1)	15	18	16
10	6	5	3	12	16	5	8	0	13	14	10
7	5	4	2	11	14	4	7	(0)	11	11	7
3	2	3	1	8	11	2	4	(0)	9	7	3
1	0	1	(1)	4	8	0	3	(0)	5	3	1

centiles for men and women separately. These tables enable each college to find the rank of each student in the national scales for either sex. These tables show that the tests are

TABLE 11.—Distributions of college averages on physics test topics and four combinations of topics. The means are graphed in terms of national men's percentiles.

Natl. Men's %iles	Mech.	Heat	Sound	Mech. + Heat	Mech. + Heat + Sound	Light	Elec.	Mod. Phys.	Light + Elec.	Light + Elec. + Mod. Phys.	Natl. Men's %iles
88—91	3			1	1	2			1		88—91
84—87	2		1	3	3	1			2	1	84—87
79—83	2	2	3	2	1	3	3	4	3	1	79—83
72—78	3	6	3	5	7	3	7	1	3	4	72—78
66—71	7	5	8	7	6	4	7	4	8	3	66—71
58—65	13	17	12	9	10	16	13	9	15	4	58—65
50—57	20	17	13	16	12	19	15	9	16	8	50—57
42—49	13	13	19	15	10	10	19	6	8	8	42—49
34—41	14	18	7	14	14	10	14	8	14	6	34—41
27—33	8	11	12	10	9	11	6	3	9	5	27—33
21—26	6	9	8	3	3	9	10	4	3		21—26
16—20	6	3	4	4	4	4	2		6	2	16—20
12—15	2	1	2	3	1	2	2		2	2	12—15
8—11	3	1	1	1		1	4		1		8—11
6— 7		1	1		1	1	1		1		6— 7
Total	102	103	94	93	82	96	103	48	92	44	

well scaled in difficulty to differentiate the good and poor students in the participating colleges.

Variability of Achievement.—The distributions of scores in individual colleges show the same types and degrees of variability in physics achievement as are shown in Charts I and II above in English and Contemporary Affairs. In some colleges students at the end of the physics course are all below the national average, and in other colleges all or nearly all students are above the national average.

College Averages.—Table 11 shows the fact made familiar by all similar testing programs in colleges and secondary schools, that institutional averages vary almost as widely as do the individual pupil scores in any one institution. In the full report of the physics program (*The American Physics Teacher,* Supplement, September, 1935), distributions of college averages for six types of colleges are shown in a table similar to Table 11. The differences between types of institutions are sufficiently noticeable to tempt one to interesting speculations, but the samplings are obviously inadequate for even tentative conclusions. Moreover, the differences within types are greater than those between types; and differences within single classes are much more significant from every constructive viewpoint than differences between institutions or types of institutions.

Gains in Achievement.—The test results of those colleges administering tests before and after study were analyzed to discover the average gain of all students without regard to type of school, and of student groups in colleges making the largest and smallest gains. The results are shown in Chart VII.

The indications of this chart are so similar to those of the corresponding chart for last year that they may be discussed in precisely the same language that appeared in the 1934 program report: The amount of gain within single colleges varies markedly. These differences, however, are not subject to direct comparison, since the abilities and aptitudes and needs vary from college to college. The average gain for all students is of general interest; the gain of any one is of interest only to that college. It must be kept in mind that the average class gain must be interpreted in the light of local conditions. Each college must set up its own norms of expectancy, and the deviations from this norm may be analyzed with reference to the individual case. Individual differences cover a wider range, and are educationally more significant than the variations occurring between groups. Charting of single case gains cannot be done in this study; it may be done, however, by each department to determine differences in growth. Doubtless some such charts will be startling. Within the same class, some students will make tremendous gains in achievement, others will make little or none. Those deviations which are most marked may be investigated with a view to further clinical diagnosis and educational guidance. But the average gain for the school is most significant when it is taken as the point of reference for the interpretation of the individual gain.

In this connection it is difficult to exaggerate the importance of the variability of scores in the pre-study groups. All teachers in physics and other subjects are only too painfully aware of the variability in post-study groups, because there are too few classes in which some students are not "flunked"; but not many teachers are clearly aware of the highly important and encouraging fact that a few students at the *beginning* of a course are already able to equal or exceed the average of the whole class at the *end* of a course. Chart VII shows that in Mechanics about 20 per cent of the students at the beginning were above the average of the class at the end of the semester; and in both Mechanics and Heat one student at the beginning secured a score which was achieved only by the highest two per cent of the class at the end. In Heat and Sound over five per cent of the pupils secured pre-study scores above the post-study average score of the entire group that took the tests.

The advantages of early identification of such promising pupils are obvious, and it is gratifying to note that during the last few years the search for and special study of such pupils has been a growing concern of an increasing number of teachers of physics and other subjects. Of course, no single test can be expected to give a fully trustworthy index of even one of the many qualities required for a productive career in physics, but any student who *before* formal instruction secures a higher score than the average student secures *after* formal instruction is at least worthy of being studied. Some of them very richly reward the teacher who vouchsafes them special attention and encouragement.

The students at the other end of the scale also merit special attention. Some of them, after taking a full course at the expense of the state or of their parents, are still in the score-range of the lowest one per cent of those who are tested at the beginning of the course. Some of these students work harder than the majority of those who make large gains and passing grades; while it is obvious that they do not deserve, or rather, that their lot will not be improved (and might be aggravated) by passing grades in *physics,* it is the opinion of a growing number of educators that such students do deserve something more constructive and helpful for their time and money than merely a flunking grade. It is equally true that society deserves more for the time and money spent on such pupils than the mere stigmatizing of them as "failures." The question of what to do for such students can be answered only by careful and long continued experimentation. An essential part of such experimentation will be a surer identification of such students, and a more adequate study of their growth along various lines of development. Growth cannot be studied without comparable measures; hence the emphasis which the committee has placed on the importance of developing *comparable* tests.

Sex Differences.—Differences between men and women groups of physics students in this program have already been set forth in Tables 9 and 10. While there are apparently real differences between the sex groups, these tables show that the differences within sex groups are much greater and much more important than group differences. The superior student, regardless of sex, should be identified, encouraged to continue in subjects for which he displays a particular flair, and given special work if such seems desirable to the department head in the light of all relevant data and circumstances. One department head has suggested that it may be a greater contribution to turn out one gifted research scholar than to turn out a hundred "pass" students each year. But there is no necessary conflict between these two types of contributions. Physics has rich cultural, as well as disciplinary and scholarly values; special care of the few gifted pupils does not mean that the less gifted pupils need to be neglected or sacrificed on the high standards which are appropriate only to gifted pupils.

CHEMISTRY, ZOOLOGY, AND BOTANY PERCENTILES

Table 12 shows abbreviated percentiles for the Chemistry, Zoology, and Botany tests, based on all returns from all colleges that used these tests and which reported results in time for inclusion in this report. As noted above, the numbers of cases are somewhat larger this year than last year. It is hoped that, with the collaboration of the recently appointed test committees of the chemistry and zoology societies, the science testing program will be greatly expanded next year and in succeeding years. The value of this program will be increased not only by increasing the number of colleges that use the tests, but by increasing the number that report their results back to the committee. Table 12 shows that the numbers of colleges reporting Chemistry, Zoology, and Botany test results are 35, 20, and 11, respectively. The corresponding numbers that actually used the tests are 78, 35, and 19, respectively. If all these colleges had reported, Table 12 would constitute more valid norms.

Scores of Secondary School Pupils on College Science Tests.—Through the cooperation of the headmasters and science teachers in four independent secondary schools, where the college science tests were given purely for experimental purposes, the committee is enabled to present some very interesting data which tend to confirm the indications of the college-secondary school comparisons of Charts I and II. The numbers of pupils in the four independent secondary schools who took the tests were as follows: Chemistry, Part C, 270; Physics: Mechanics 247, Heat 54, Sound 56, Light 57, Elec-

TABLE 12.—Percentile tables for Chemistry, Zoology, and Botany tests. Because of the small numbers of cases, the percentiles are presented in abbreviated form. The tests were given at the end of the college year to students in elementary college courses in these sciences.

	CHEMISTRY			ZOOLOGY	BOTANY	
Test	Part I	Part II	Part C.	Part C.	Part C.	
No. of Colleges	8	6	35	20	11	
No. of Cases	241	148	1,580	662	277	
Mean	172	119	124	105	109	
Sigma	61.9	23.4	46.5	49.4	40.5	
Percentiles						%iles
100	447	175	280	240	220	100
98	335	161	225	198	206	98
93	270	149	197	171	173	93
90	261	147	187	160	167	90
84	240	143	172	150	154	84
80	223	140	164	141	144	80
75	211	135	155	133	133	75
70	191	130	148	127	127	70
60	174	124	133	114	117	60
50	162	120	121	101	105	50
40	147	116	107	91	91	40
30	136	110	94	79	82	30
25	125	107	87	74	78	25
20	119	99	80	68	72	20
16	112	97	75	61	68	16
10	98	91	65	51	60	10
7	95	85	59	46	56	7
3	90	63	50	35	50	3
1	67	57	40	24	40	1

tricity 243, Modern Physics 10; Zoology, Part C, 11. Of these secondary school pupils, about 56 per cent were above the college average in Chemistry; 22 per cent in Mechanics, 47 per cent in Heat, 8 per cent in Light, 25 per cent in Electricity, 75 per cent in Modern Physics; and 70 per cent in Zoology, Part C.

Some of the secondary school pupils made very high scores on the college science tests. In Chemistry 7 per cent, in Mechanics and Electricity 1 per cent, and in Modern Physics and Zoology, Part C, more than 25 per cent, were in the highest 10 per cent of the college group.

While these data do not afford evidence on the comparative science achievement of secondary school pupils in general, they do indicate that some individuals who are officially recognized as secondary school students in credit status are above, and in some cases far above the average of college student groups on tests designed specifically for college science courses. The committee hopes that the experiment in these four secondary schools may be continued on a more extended basis.

The Committee on Educational Testing,

F. S. Beers,
Secretary;
S. P. Capen,
G. W. Frasier,
J. T. Giles,
V. A. C. Henmon,
J. B. Johnston,
Max McConn,
Chairman;

F. L. McVey,
G. M. Ruch,
W. L. Spencer,
L. M. Terman,
G. A. Works,
C. S. Yoakum,
G. F. Zook,
Ex-officio.

The American Youth Commission

AT THE Annual Meeting of the American Council on Education in May, 1935, announcement was made of a grant of $500,000 from the General Education Board to pay the expenses of a commission and its staff for a study of the problems in the general education of American youth approximately twelve years of age and upward. (See EDUCATIONAL RECORD, July, 1935, pp. 253-254.)

The first meeting of the Commission was held in Washington, D. C., Monday, September 16th, at the call of Dr. George F. Zook, President of the Council. The following individuals were named as members of the Commission:

WILL W. ALEXANDER, Atlanta, Georgia

Mr. Alexander is an outstanding leader in the field of race relations. A former clergyman, he has served with conspicuous success as the Executive Director of the Commission on Interracial Cooperation, and in 1928 was awarded the Harmon national award for services to American race relations.

NEWTON D. BAKER, Cleveland, Ohio

Mr. Baker, eminent attorney, distinguished himself as Secretary of War in the cabinet of President Wilson from 1916 to 1921. He was named later by President Coolidge as a member of the Permanent Court of Arbitration, The Hague. Mr. Baker has taken an active part in the work of many national and international movements for social improvement.

RALPH BUDD, Chicago, Illinois

Mr. Budd is a leading railway executive. He has advanced through the ranks of the organization to his present post as President of the Burlington Lines.

LOTUS D. COFFMAN, Minneapolis, Minnesota

Mr. Coffman, president of the University of Minnesota, is one of the best known American educators. Now serving his third term as Chairman of the American Council on Education, he has been active in the development of many other fields of education.

DOROTHY CANFIELD FISHER, Arlington, Vermont

Mrs. Fisher, one of America's most prominent woman writers, has long been interested in the problems of education and young people. Her thought-provoking book, "Why Stop Learning?" crystallizes many of the difficulties which face the schools and the people of this country.

WILLARD E. GIVENS, Washington, D. C.

Mr. Givens, the secretary of the National Education Association of the United States, directs the activities of this influential educational organization. He formerly served as Superintendent of Schools in San Diego and Oakland, California.

HENRY I. HARRIMAN, Boston, Massachusetts

Mr. Harriman, past-president of the Chamber of Commerce of the United States, is an outstanding public utility executive. He is Chairman of the Board of the New England Power Association and other major corporations.

ROBERT M. HUTCHINS, Chicago, Illinois

Mr. Hutchins, one of the youngest and most progressive college administrators in the country, is president of the University of Chicago.

CHESTER H. ROWELL, San Francisco, California

Mr. Rowell, editor of the San Francisco Chronicle, has a wide reputation as a lecturer and writer on political science. He is a trustee of the World Peace Foundation and has served on many national commissions dealing with social problems.

WILLIAM F. RUSSELL, New York, New York

Mr. Russell is Dean of Teachers College, Columbia University. A former chairman of the American Council on Education, he is recognized as a progressive educational leader.

EDITH R. STERN, New Orleans, Louisiana

Mrs. Stern is a well known civic leader who has been keenly interested in the development of plans for the improvement of the nation's schools. Her interest in young people has given her a sympathetic appreciation of the problems confronting American youth.

JOHN W. STUDEBAKER, Washington, D. C.

Mr. Studebaker has been United States Commissioner of Education since September, 1934. Formerly Superintendent of Schools of Des Moines, Iowa, he is nationally known for the public forum, which he organized in that city.

MIRIAM VAN WATERS, Framingham, Massachusetts

Miss Van Waters, Superintendent of the State Reformatory for Women at Framingham, Massachusetts, has been a leader in the field of American social work for many years. She has been particularly concerned with problems of juvenile delinquency and consulted with the National Committee on Law Observance and Enforcement on this subject. A former president of the National Conference on Social Work, she has written "Youth in Conflict" and "Parents on Probation" among other outstanding sociological contributions.

MATTHEW WOLL, New York, New York

Mr. Woll, vice-president of the American Federation of Labor, is a noted writer and lecturer on labor and economic topics. He served on President Harding's Unemployment Conference and is a member of the National Academy of Political Science of New York.

It will be seen at once that the Council has selected a very representative group of outstanding leaders in American civic and educational life. From a group of this consequence the public may expect during the ensuing years well considered plans for meeting one of the most troublesome problems in American life.

Dr. Homer Price Rainey, President of Bucknell University, was selected as director of the staff by the Commission at its first meeting. In selecting him, the American Youth Commission has secured the services of a man who is well known as a liberal educational administrator. Dr. Rainey, who is thirty-nine years of age, has been President of Bucknell University since August, 1931. Prior to that he was President of Franklin College, and Professor of Education at the University of Oregon. At Bucknell, Dr. Rainey became nationally known for sponsoring a program of liberal education in which the arts have a prominent part. He urged for students the increase of opportunity for creative expression in literature as well as in the fine arts, and re-arranged the curriculum so that the laboratory method was applied in these fields.

At the meeting of the Commission the following letter from President Roosevelt was read:

The White House, Washington.

MY DEAR DOCTOR ZOOK: August 31, 1935.

I am pleased to learn of the Commission of the American Council on Education which is to conduct a five-year study of the problems in the care and education of American youth. You and your Commission know of my interest in youth; you are familiar with the splendid record of the Civilian Conservation Corps; and you are yourself a member of the Advisory Council of the more recently organized National Youth Administration.

To the members of the Youth Commission of the American Council on Education please extend my best wishes together with my confident expectation that your Commission and the National Youth Administration may be mutually helpful and effective in their efforts for American youth.

Very sincerely yours,

(Signed) FRANKLIN D. ROOSEVELT.

Mr. Newton D. Baker was selected as temporary chairman of the Commission, and Miss Miriam Van Waters was named secretary. An executive committee composed of Mr. Baker, Mr. Henry I. Harriman, and Dean William F. Russell will act for the Commission between its meetings.

The responsibility of the American Youth Commission is comprehensive. It will devote itself to all those problems affecting the fortunes and development of young people. Among these matters are health, recreation, vocational adjustment, crime and a host of other considerations all of which are or should be closely related to the educational program.

The task which faces the Commission is very large. It cannot hope to complete its work at an early date. Already $300,000 has been set aside for the early projects and additional funds will be available as the Commission develops its program.

The Commission will cooperate with all governmental, educational or social agencies interested in the solution of the various phases of the youth problem, such as the National Youth Administration, the Civilian Conservation Corps, and the many state and local efforts which are now under way.

The interest and enthusiasm of the Commission indicates the possibilities of this important project. Of the work Mr. Baker said, "I doubt whether any other research or survey has been proposed in my lifetime which seems to me to have a greater field of usefulness."

The headquarters of the Youth Commission will be in the same building with the American Council on Education, 744 Jackson Place, Washington, D. C.

The Council at Work

THE EDUCATIONAL RECORD presents in this section a new editorial feature. The Council at Work will be a brief summary of the outstanding new projects in which the Council is interested, as well as progress reports on undertakings already launched. It is hoped that this survey will give to the members of the Council and those interested in its work a more intimate view of the Council's development. Individuals desiring further information regarding subjects mentioned in this section are invited to write to the offices of the American Council on Education.

AMERICAN YOUTH COMMISSION

(See page 482)

MOTION PICTURES IN EDUCATION

The Executive Committee of the Council met on June 30, 1935, in Chicago. At that time President George F. Zook announced the receipt of a grant of $12,500 from the General Education Board for certain projects relating to the use of motion pictures in education.

Under the supervision of Dr. Edgar Dale of Ohio State University, who was active in the Payne Fund Studies of the cinema, preliminary surveys are being made with regard to the preparation of an annotated bibliography of pertinent material in this field; a study of effective administrative practices in visual education; the preparation of a complete file which will contain significant information about all available educational films; a study of specifications for equipment; and the formation of a subject-matter committee in the field of physical education and health to carry out a complete cycle of activities.

FINANCIAL ADVISORY SERVICE

A grant of $10,000 was also reported from the General Education Board for the development by the American Council on Education of a Financial Advisory Service for Colleges and Universities. Mr. George E. Van Dyke, who took an important part in the work of the National Committee on Standard Reports, has been selected as Financial Assistant in charge of this new division of the Council's activities. Mr. Van Dyke will have the cooperation of various experts in the field of educational finance. Offices have been established at 744 Jackson Place, Washington, D. C.

The Financial Advisory Service will assist individual institutions in the adoption of the recommended procedures and reports developed by the National Committee on Standard Reports; in surveys of financial conditions; and by the maintenance of references and illustrations on all phases of financial administration so that advice on specific problems based on the experience of other institutions can be provided.

The new service should also be of value in developing basic principles of financial administration regarding budget making, allocation of resources, investments, accounting, cost studies, etc.

COMMITTEE OF TWENTY-ONE

For the study of the formulation of tentative standards or guiding principles of secondary education, the several regional accrediting agencies have appropriated approximately $8,000 to supplement the gift of $25,000 announced at the annual meeting of the Council.

Dr. Walter Crosby Eells, Professor of Education at Stanford University, has been named Coordinator for the Committee of Twenty-One.

The Committee has established offices at 744 Jackson Place, Washington, D. C., and Dr. Eells will supervise the development of this important study.

NATIONAL LEGISLATION

President Cloyd H. Marvin's Committee on National Legislation was particularly active during June and July. Through conferences at the White House and with Senators, Members of the House of Representatives and other influential figures, this committee was able to keep in close contact with the various legislative actions which affected education.

The Committee assisted in securing for private and public institutions exemption from certain provisions of the Social Security Bill and the McCormack Bill, which was concerned in part with taxation of gifts for educational purposes.

"THE AMERICAN STATE AND HIGHER EDUCATION"

The first publication of the Council's joint committee with the Social Science Research Council on Administrative Phases of State Educational Systems is *"The American State and Higher Education—The Legal, Political and Constitutional Relationships"* by Dr. Alexander Brody. Prepared for the Committee under the chairmanship of Dr. A. B. Meredith, the volume, a scholarly study of the history of legal decisions affecting higher education, has been most favorably received as a readable and authentic handbook. Copies are on sale by the Council: Cloth bound, $1.50; paper bound, $1.00.

"AMERICAN UNIVERSITIES AND COLLEGES"

The printing contract for the third edition of the valuable "Handbook of American Universities and Colleges" has recently been awarded to a large publishing house. The exhibits to be included in the volume have been referred to the 670 institutions of higher education on the accredited list, as well as to the major associations described in the book. Approximately 150 additional institutions will be represented in this new edition, as compared with the 1932 volume. Since the "Handbook" will be completed in March, 1936, advance orders are now being received.

THE 1935 PSYCHOLOGICAL EXAMINATION

One hundred and sixty thousand copies of the 1935 edition of the Psychological Examination for High School Seniors and College Freshmen, prepared by Professor and Mrs. Thurstone of the University of Chicago, have already been distributed by the Council. The fact that an increasing number of institutions are regularly using these tests in their admissions procedure attests to their deserved popularity.

AMERICAN ASSOCIATION OF TEACHERS COLLEGES

The accredited institutions of the American Association of Teachers Colleges were added by the Executive Committee of the Council to the roll of institutions eligible for membership in the Council, for inclusion in the list of accredited institutions prepared by the Council each year and for representation in the "Handbook."

FOURTH EDUCATIONAL CONFERENCE

The 1935 joint conference of the Cooperative Test Service and the Committee on Educational Testing of the American Council on Education, the Committee on School and College Relations of the Progressive Education Association, and the Educational Records Bureau will be held in New York City on October 31 and November 1. This conference, the fourth annual session, will consider fundamental developments in the field of education and guidance.

Among the speakers who will appear are: Dr. W. A. Jessup, Carnegie Foundation; Dr. Claude M. Fuess, Phillips Academy; Dean Virginia Gildersleeve, Barnard College; Dr. I. L. Kandel, Columbia University; Dr. Ralph Tyler, Ohio State University; Dr. Wilford Aikin, John Burroughs Day School; and Dr. Richard M. Gummere, Harvard University.

At the dinner on Friday, November 1, Dr. Rexford Guy Tugwell will address the conference. Further details can be secured from Dr. Ben Wood, 500 West 116th Street, New York City.

NATIONAL YOUTH ADMINISTRATION

The Council has cooperated with the Federal Government in the establishment of the National Youth Administration. President George F. Zook has been named a member of the Advisory Council.

PROBLEMS AND PLANS COMMITTEE

Dr. Payson Smith, Commissioner of Education of Massachusetts, has been elected to fill the vacancy on the Committee on Problems and Plans in Education.

CONFERENCES

The American Council on Education has been represented at the following conferences and meetings:

National Education Association, Denver, Colo.
National Occupational Conference, Estes Park, Colo.
Conference on Higher Education, Minneapolis, Minn.
Conference of Directors of Higher Education, Paris, France.
World Conference of Educational Associations, Oxford, England.
Institute for Education by Radio, Columbus, Ohio.
American Association for Adult Education, Milwaukee, Wis.
Progressive Education Association, Buffalo, N. Y.
Museum of Modern Art, Hollywood, Calif.

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